# VILLAGE OF PALATINE

VILLAGE HALL - COUNCIL CHAMBERS 200 E. WOOD STREET
PALATINE, IL 60067-5339 – (847) 359-9050
http://www.palatine.il.us

## PLANNING AND ZONING COMMISSION

## AGENDA ● APRIL 9, 2024

**Village Hall - Council Chambers** | **Regular Meeting** | **7:00 PM**

### I. CALL TO ORDER

### II. MEETING MINUTES

1. Planning and Zoning Commission - Regular Meeting - Mar 26, 2024 7:00 PM

### III. PUBLIC HEARING

1. 1521 E. Reynolds Drive

   (a) Special Use to permit a home addition to be set back 30 feet from the rear property line, instead of the minimum required 40 feet.

2. 2240 - 2266 N. Rand Road

   (a) Final Planned Development to permit a logistics and distribution use, with accessory office uses; and

   (b) Final Plat of Subdivision to allow for the consolidation of 6 existing lots into one consolidated lot;

### IV. COMMUNICATIONS

### V. ADJOURNMENT

# VILLAGE OF PALATINE

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## PLANNING AND ZONING COMMISSION

## MINUTES ● MARCH 26, 2024

**Village Hall - Council Chambers** | **Regular Meeting** | **7:00 PM**

## I. CALL TO ORDER

| Attendee Name | Title | Status | Arrived |
|---|---|---|---|
| Patrick Noonan | Commissioner | Present | |
| Cindy Roth-Wurster | Commissioner | Present | |
| Eric Friedman | Vice Chairperson | Present | |
| Jan Wood | Chairperson | Present | |
| Rodney Bettenhausen | Commissioner | Present | |
| Robert Kolososki | Commissioner | Absent | |
| Kevin Cavanaugh | Commissioner | Absent | |
| Stephen Fedota | Commissioner | Present | |
| Tim Schubert | Commissioner | Absent | |

## II. MEETING MINUTES

1. Planning and Zoning Commission - Regular Meeting - Mar 12, 2024 7:00 PM - **Accepted as Amended**

| | |
|---|---|
| **RESULT:** | **ACCEPTED AS AMENDED [UNANIMOUS]** |
| **MOVER:** | Patrick Noonan, Commissioner |
| **SECONDER:** | Stephen Fedota, Commissioner |
| **AYES:** | Noonan, Roth-Wurster, Friedman, Wood, Bettenhausen, Fedota |
| **ABSENT:** | Kolososki, Cavanaugh, Schubert |

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## III. PUBLIC HEARING

1. 228 N. Clyde Avenue **- Recommend To Approve**

**PFSUB-000005-2024 - 228 N Clyde Ave**

Notice was published in the Journal & Topics on March 7th, 2024 and mailed to the owners of the surrounding properties.

**Petitioner's Exhibits:**

1. **Application**
2. **Proof of Ownership**
3. **Plat of Survey**
4. **Plat of Subdivision**
5. **Engineering Plans**
6. **Utility Map**
7. **Objection Letters**
8. **Public Notice**

Ms. Bremanis provides background and states that the Subject Property is zoned R-2 single-family and is approximately 1.027 acres. The Petitioner is seeking a Preliminary and Final Plat of Subdivision for a 2-lot subdivision. No other zoning changes or variations are contemplated and the lots will maintain the current R-2 zoning. The Petitioner is planning on maintaining the existing home on Lot 1 and selling Lot 2 to allow for a new home be constructed. The petitioner is requesting to per permit a 2 Lot subdivision.

**Sworn in petitioner**: Scott & Maria Tresselt - Owner - 228 N Clyde Avenue
Mr. Tresselt states that they are requesting the approval to subdivide the property.

Commissioner Friedman inquires whether the neighbors have provided any feedback regarding the request.
Mr. Tresselt responds, stating that the neighbors' concerns have primarily revolved around water issues. He further asserts that the proposed subdivision will not have any adverse impacts on the surrounding neighbors.
Ms. Bremanis provided further information, explaining that the lots meet all required width and lot coverage specifications. She clarified that the house on Lot 1 will remain, while Lot 2 will remain vacant until it is sold. Ms. Bremanis outlined proposed improvements, including the addition of sidewalks and storm sewer lines along Clyde Avenue, as well as tree planting.
Regarding the sidewalks along the south line across Wood Street, Ms. Bremanis noted that the Village Engineer is recommending allow for cash-in-lieu of sidewalks. Through review with the Petitioner's engineer, the Village Engineer's recommendation is due to the existing drainage conditions, as any sidewalk installation could disrupt overflow drainage to the storm sewer and the lack of

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any sidewalk system along W. Wood Street, west of Clyde Avenue.
In regard to the questions or concerns regarding construction on Lot 2 or any impact on drainage to the pond, Ms. Bremanis presented a drainage pattern map, explaining that it leads to a low spot in Lot 2. It was emphasized that upon development, maintaining drainage patterns would be crucial and would be reviewed by the Village, prior to development. Additionally, she highlighted that according to code, drainage to neighboring onto properties is not permitted.
Ms. Bremanis presented information on existing conditions. Initially, the Plat of Subdivision did not include an easement at the corner of Lot 2. The decision was made to create an easement for the existing stormwater pipe.
Commissioner Friedman inquires about the utility plan note indicating a 0" line to the pond, questioning if this is due to uncertainty about the size of the pipe.
Ms. Bremanis confirms this, stating that the lack of information regarding the size of the pipe is the reason for the notation. She explains that the pipe is located on private property and may have been installed before incorporation, hence the lack of available information.
Commissioner Bettenhausen asks about the current maintenance of the pipe.
Ms. Bremanis speculates that the residents are responsible for its maintenance, as it is on private property and not within an easement.

Commissioner Fedota queries which street the properties will face after the division.
Ms. Bremanis clarifies that both properties will face Clyde Avenue.

Commissioner Roth-Wurster raises a question regarding the existing sanitary service on North Clyde and the status of the septic field within the subdivision. Specifically, she asks if the septic is located on the lot slated for subdivision.
Ms. Bremanis explains that the house to the north will connect to the Village sanitary system, with the existing septic field properly abandoned. Regarding the lot intended for subdivision, she confirms that it will be required to tie into the Village water and sanitary services, while lot 1 will retain the well as long as it is in working order.

Resident sworn in: Steve Ferrara - 279 N Melony Court - He lives north of the pond.
Mr. Ferrara expressed concerns regarding flooding issues, specifically noting that the existing pipe running from the pond to the corner is too small. He explained that the 8" pipe needs to be upgraded and that a 50/50 cost-sharing option was proposed, but the owners of 1120 declined to participate. Mr. Ferrara emphasized that there are already flooding issues due to the pipe's inability to handle water flow adequately.
He anticipates that these problems would worsen when new construction begins and the lot is filled in. Consequently, he urged for the pipe issue to be addressed during the subdivision process.
Commissioner Friedman states that Village Code and engineering standards does not allow the grade of the property to redirect the flow of ground water.

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Chairman Wood stated that the construction could potentially provide an improvement. She emphasized that the pipe issue is not something that would be resolved during the subdivision of the property.
Ms. Bremanis states that she would help Mr. Ferrara to facilitate a conversation with the neighbors since the pipes are on private property and not on an easement.
Mr. Ferrara states he would like to see the issue resolved.

**STAFF RECOMMENDATION:**

The Subject Property is zoned R-2 and the proposed Plat of Subdivision would meet all of the R-2 zoning requirements. The existing house will remain on Lot 1 and any future development of the lot would be required to comply with of the Village Code requirements. Therefore, Staff recommends approval of the proposed request, subject to the following conditions:

1. The development shall substantially conform to the engineering plans prepared by Spaceco Inc. dated 2/28/24 and attached hereto as Exhibit 'A' except as such plans may be revised to conform to Village Codes and Ordinances.
2. The Final Plat of Subdivision shall be submitted on Mylar with the required signatures and significantly conform to the Plat of Subdivision prepared by Spaceco Inc. and attached hereto.
3. The Final Engineering Plans, Final Engineer's Estimate of Probable Cost, and Tree Preservation Plans shall be revised in a manner acceptable to the Village Engineer and Director of Planning and Zoning.
4. The existing drainage pipe in the southwest corner of Lot 2 shall be replaced, if required by the Village Engineer and relocated in the easement or a 10-foot-wide easement will need to be granted over the existing storm sewer in a manner acceptable to the Village Engineer. The final storm sewer location and extension plan shall be submitted in a manner acceptable to the Village Engineer.
5. Cash in lieu of sidewalks shall be submitted in a manner acceptable to the Village Engineer for the W. Wood Street frontage. If required by the Village Engineer, the engineering plans and site should be designed and graded to accommodate sidewalks, if they were to be installed in the future.
6. A Public Improvement Letter of Credit, in an amount of 115% of the approved EEOPC, for said public improvements, shall be submitted in a manner acceptable to the Village Engineer.
7. Review fees in the amount of 1.5% of the total project improvement costs, as defined in the Village Code, shall be submitted in a manner acceptable to the Village Engineer.
8. A Subdivision Improvement Agreement shall be submitted in a manner acceptable to the Village Attorney.
9. Recording fees in the amount of $300 shall be submitted.
10. A construction management plan indicating the proposed material delivery routes and contractor parking areas, shall be submitted to the Village Engineer and Director of Planning and Zoning.

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11. All required extra agency permits shall be submitted in manner acceptable to the Village Engineer.
12. A MWRD permit will be required for the construction of Lot 2.

Commissioner Friedman questioned whether the construction requirements only pertain to the sidewalk, considering there is no proposed house along with the subdivision.
Ms. Bremanis confirmed this and explained that the requirements also include an estimation of the storm sewer, if it is required to be replaced. She clarified that the letter of credit would include all public improvement aspects and, if someone were to buy the property and assume development responsibility of the project, a substitute letter of credit would be submitted. Additionally, she mentioned that the construction management plan is to ensure day-to-day work during construction and the letter of credit is specifically for public improvements.

Mr. Friedman inquired whether the MWRD permit is related to stormwater or sanitary issues.
Ms. Bremanis stated that it is related to stormwater and further explained that the situation is unique. The lot is 1.027 acres, and when it exceeds an acre, certain requirements come into play. She noted that they would have to address these new requirements, and while they can request a waiver because it is only .027 acres over, she couldn't predict the MWRD decision.

**There were no further questions. The public hearing was closed.**

**Commissioner Noonan Made a motion to approve subject staff's conditions; seconded by Commissioner Fedota.**

**DELIBERATIONS:**
Commissioner Fedota stated that the request meets the setback requirements and that water issues have been adequately addressed by engineering. He finds this to be a reasonable request.

Commissioner Friedman remarked on the surrounding area, noting that properties along Wood Street consist of larger parcels, while directly across the street, original constructions have been subdivided into smaller parcels. He believes the proposal aligns with the character of the surrounding properties to the east and stated that no relief is needed to make it work.

Chairman Wood commented that the lot is large enough to be subdivided. She also acknowledged the ongoing issue regarding water, but determined that this request would not exacerbate it, expressing confidence in the Village Engineer. She expressed hope that the neighbors are able to find a resolution to the pipe issue.

**Chairman Wood summarized that this request has met the standards and was unanimously approved by a vote of 6-0. This item will tentatively go to**

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**Village Council on Monday April 8th, 2024.**

| | |
|---|---|
| **RESULT:** | **RECOMMEND TO APPROVE [UNANIMOUS]** |
| **MOVER:** | Patrick Noonan, Commissioner |
| **SECONDER:** | Stephen Fedota, Commissioner |
| **AYES:** | Noonan, Roth-Wurster, Friedman, Wood, Bettenhausen, Fedota |
| **ABSENT:** | Kolososki, Cavanaugh, Schubert |

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2. 223 E. Illinois Avenue **- Recommend to Deny**

**PPD-000009-2024 - 223 E Illinois Avenue**

Notice was published in the Journal & Topics on March 7th, 2024 and mailed to the owners of the surrounding properties.

**Petitioner's Exhibits:**

1. **Preliminary Planned Development Application**
2. **Proof of Ownership**
3. **Site Plans**
4. **Floor Plans**
5. **Business Plan**
6. **Concept Elevations**
7. **Village of Palatine Current Zoning Map**
8. **Future Land Use Map - VOP Comprehensive Plan**
9. **Plat of Survey**
10. **Objection Letters & Petitions**
11. **Public Notice**

Ms. Bremanis provides background information on the request and states that the Subject Property is zoned R-1 Single Family and was platted in 1926 and annexed into Palatine in 2002. Historically, the property received a unique use to operate a residential cleaning use in unincorporated Cook County, which continued to operate and ultimately ceased operations. It has most recently functioned as single-family residence. The property is directly south of Clearbrook and directly west of the existing church and parking lot at 239 E. Illinois Avenue. The property is surrounded on all 3 other sides by single-family homes in Palatine and another single-family residential subdivision in Rolling Meadows.

The Petitioner is proposing construct a new 2-story bank, with a drive-through. Selfreliance presently operates in the Ukrainian Youth Center property located on Illinois Avenue, west of the Subject Property. The proposed location is intended to vacate tenant space back to the Center. Therefore, the Petitioner is requesting:

**Preliminary Planned Development to permit a Financial Institution with a Drive-Thru.**

**Sworn in petitioners**:
Mr. Vitaliy Kuynyy - President and CO of SelfReliance Federal Credit Union 2332 W. Chicago Ave., Chicago, IL
Mr. Nester Popowych - 1110 N Lake Shore, Chicago, IL - Architect
Mr. Myron Waxiunec - 1135 N PepperTree Dr., Palatine, IL - Member of Board of Directors for the Credit Union

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Mr. Popowych provided a brief description of the site plan, stating that the goal is to minimize the impact of egress and ingress traffic and mitigate light, sound, or noise for the neighbors on the west and east sides. He presented a site plan indicating that the building would be two stories with a pathway to the backyard courtyard.
Further details include one driveway with ingress to the west and egress to the east. The plan incorporates shrubbery and fencing buffering the existing residential properties. Mr. Popowych explained that parking would be available for approximately 85 cars, with a setback of 30 feet and the building positioned slightly further back. The building would face westward.

He also mentioned that there would be a drive-thru at the credit union, with the exit onto Illinois Street. At this stage, the floor plans have not been fully developed, and he believes that the footprint of the site plan would be addressed during subsequent stages.
Commissioner Friedman noted that the floor plan mentions future stairs and inquired whether there would be stairs on day one.
Mr. Popowych explained that the plan is to construct a two-story structure that would include stairs, utilities, and restrooms initially on the second floor, with no further development of the floor plan until the credit union grows.
Commissioner Friedman then asked about plans for site lighting.
Mr. Popowych responded that there is a concept to mitigate lighting with low bollards, which would be installed along the pedestrian way and in the parking area. He assured that the illumination level required by the village would meet standards, with illumination directed toward the ground.
Commissioner Friedman further inquired whether the lighting would be above the height of the fence.
Mr. Popowych confirmed that it would not.
Commissioner Bettenhausen inquired about the location of the dumpster.
Mr. Popowych stated that it would be planned at the southeast corner and would be a 10x14 enclosure.
Commissioner Friedman noted that the site plan submitted did not match the building shape.
Mr. Popowych acknowledged this, mentioning it may have been an oversight and provided an updated drawing for clarification, which was then passed among the commissioners.
Commissioner Friedman asked if the new plan changed the side of the building where the drive-thru is located, noting discrepancies between the site plan and floor plan regarding the orientation of north. He requested clarification on whether the site plans had changed, as it was confusing given the discrepancies.
Mr. Popowych apologized for the confusion and affirmed that the site plan was correct.
Commissioner Fedota asked about the alternative site plan driveway.
Mr. Popowych explained that it was considered as an alternative, but feedback from staff was there were concerns on traffic patterns within in the site.

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Commissioner Fedota then inquired about how snow removal would be handled.
Mr. Popowych stated that snow removal for the site would be serviced by a contractor, and the method of pushing or removing snow would be determined by the owner and contractor. If removal of snow becomes the only viable alternative, the contractor would handle the removal. He noted that maintenance issues had not been addressed at this point in time.
Commissioner Ruth-Wurster asked if the drive-thru lanes are planned to be manned or if there will be an ATM aisle.
Mr. Popowych responded that there will be two lanes serviced by tellers inside the facility, and there will also be one ATM lane, which will not be manned.
Mr. Myron Waxiunec provided further information regarding his interest in the project. He stated that he has been a Palatine resident for the past 40 years and is a member of the Ukrainian community, church, and serves on the board of the Selfreliance credit union. Mr. Waxiunec expressed his intention to clarify misconceptions regarding the Ukrainian community and the plans for the project.

He addressed concerns raised in letters of opposition, stating that they are misinformed regarding key elements. Mr. Waxiunec assured that traffic concerns, hours of operation, size of structure, and lighting concerns would be addressed. Business hours would align with those of other financial institutions, and there would be no late hours. Lighting issues would be managed with timers, and sound and privacy concerns would be addressed with fencing at the maximum height allowed by the village.

As a commercial enterprise, they would not seek tax exemption and would provide tax revenue to the village. Mr. Waxiunec clarified that the credit union is available for membership to anyone and is not exclusive to the Ukrainian community. He emphasized that the proposed structure's size on a 1-acre lot is within reason compared to surrounding properties, many of which are two-story homes on smaller lots.
Regarding zoning, Mr. Waxiunec stated that the facility would visually and aesthetically blend in, and well-kept grounds would enhance the value of surrounding properties. He mentioned that the previous property owners did not maintain the property. Mr. Waxiunec highlighted the unprecedented growth of the Ukrainian community due to ongoing world circumstances and reiterated that the plan would benefit the community and cooperate with neighbors to provide solutions for maintaining their peaceful lifestyle, privacy, and home value.

Chairman Wood ask what hours would be for this location and asks if they would mirror the other locations.
Vitaliy Kuynyy stated the proposed hours as 10 am to 7 pm Monday through Friday, and 9 am to 1 pm on Saturday and Sunday.
Chairman Wood asked if other locations are tied to the Ukrainian church or center.
Mr. Vitaliy Kuynyy and Mr. Waxiunec provided information regarding other locations, noting that they are busy due to the influx of refugees. They mentioned

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that the busiest times anticipated are Friday, Saturday and Sunday after church services.
Chairman Wood then asked if the parking spaces would accommodate the busy speculation.
Mr. Waxiunec stated that the parking spaces would primarily be for the current credit union members across the street and did not foresee that the parking lot would be filled to capacity.
Commissioner Roth-Wurster clarified that the ATM would be a 24-hour location.
Commissioner Bettenhausen noted that the business plan includes community engagement, workshops, literacy programs, and network events, and asked if these would occur during normal hours.
Mr. Waxiunec confirmed that they would.
Commissioner Friedman asked if any studies were done regarding the existing location across the street, considering it is a large lot, and whether they researched the option of using the land for this purpose.
Mr. Waxiunec stated that they did not explore that option, as the open area is used for their recreation.
Chairman Wood asked if other zoned commercial properties were considered.
Mr. Waxiunec responded that other properties did not support their vision, as they are seeking one-stop shopping with everything close together, and the proposed property aligns with their vision.
Chairman Fedota asks if the plan is to occupy the basement and the first floor. Questions the need for such a large building.
Mr. Kutnyy states the vision is for the opportunity to grow.
Mr. Waxiunec further states it may also be used as the executive space.
Chairman Fedota notes that it is a lot of space for 25-30 employees.

Mr. Waxiunec provides a representation of the proposed building is presented and emphasizes the plan for the property and talks about the plants and shrubbery planned. He also presents a zoning plan that provides zoning in place surrounding the proposed site.

Commissioner Bettenhausen asked how many parking spaces would be required.
Ms. Bremanis responded that there would be 18 spaces required per floor, providing required parking for two floors. She mentioned that the final use of the basement would be addressed within the final archit.
Mr. Popowych clarified that the basement level would be used for storage.
Mr. Fedota stated that the plan seemed to indicate that the basement was to be used for commercial purposes.
Mr. Friedman asked if the floor plans available in the packet were not the current plans, as they indicated flexible office areas on both the first floor and basement, adding to the confusion.
Mr. Popowych clarified that the floor plan for the basement is intended for storage.

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Resident - Tiffany Heinlein - 1431 Jill Court - Rolling Meadows, IL
Ms. Heinlein stated that her house and yard align with the development on the south end. She expressed opposition to the rezoning, stating that it will alter the neighborhood. Ms. Heinlein mentioned that she has deep roots in the community and has lived in her current home for six years. She provided information about her background in social work and expressed her commitment to providing inclusion and resources.
Ms. Heinlein expressed concerns about the project bringing noise and unwanted traffic to their doorstep. She noted that the petitioners are not the ones whose lives will be impacted. Ms. Heinlein mentioned that Palatine has unused commercial properties available and questioned why they would encroach on residential areas for commercial endeavors.
She questioned the true benefit to the community when it alienates a significant portion of residents. Ms. Heinlein requested prioritizing the interests of residents, preventing the construction, and preserving the neighborhood.

Commissioner Friedman asks what the height of her deck structure is.
Ms. Heinlein states it is approximately 6' and lot line backs up to the proposed construction.
Commissioner Friedman noted same height of proposed fence.
Ms. Heinlein noted it would be right at the proposed location of the dumpster as well.

Resident: Sandip Patel - 813 S California Ave
Mr. Patel, a resident of 22 years, expressed his concerns regarding the request, describing it as aggressive and inconsiderate. He cited safety concerns, noting that the project would provide a clear sightline to the back of his home. Mr. Patel expressed his discomfort with the prospect of needing to keep windows and blinds closed due to the potential intrusion of views from the proposed building. He also pointed out discrepancies in the submitted business plan and floor plan, which raised suspicions about the intent of the project.
Regarding lighting concerns, Mr. Patel mentioned that lights illuminating into his property throughout the night would be annoying. He emphasized safety concerns related to a 24-hour ATM, expressing unease about cars and people coming through at all hours of the night.
Mr. Patel reiterated his belief that a financial institution in a residential neighborhood is unnecessary and emphasized potential negative impacts on property values. He concluded by requesting the commissioners to vote against the proposal.

Resident: Mohammed Abdul-Gaffoor - 849 S Cedar St.
Mr. Abdul-Gaffoor, a resident of Palatine for over 20 years who owns property on 1455 N. Vermont St, voiced his opposition to the construction of a two-story building at this location. He cited traffic as his primary concern and expressed the view that this area is not suitable for commercial use.
Resident: Greg Drake - 838 S California

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Mr. Drake asks if you are required to be of Ukrainian decent to be a member of the credit union.
Mr. Waxiunec states that is not necessary.
Mr. Drake asked if the open property by the Ukrainian Youth Center was considered and if this property could be used as an open space.
Resident: Cathy & Tom Kellard - 1421 Jill Ct.
Mr. Kellard, a resident for over 40 years with a direct view of the property in question, urged the board to consider zoning decisions with regard to the neighborhood's residents. They expressed concern that the rezoning would negatively impact their quality of life, safety, and property value. They noted the availability of other properties zoned for the proposed use and requested that the current request be denied.
Ms. Heinlein has concerns about potential expansions.

Mr. Waxiumec noted the credit union is a separate entity from the youth center and church.
Mr. Kuynyy stated he wanted to clarify that membership to the credit union is open to the public and is separate from any activities associated with the church or youth center. In addition, the only expansion would the build out of the proposed second floor. As far as safely the employees currently located across the street are the ones that would be working at this location.
Mr. Patel commented that there are always changes in employment moving forward. He noted that regardless of changes he does not want the use changed from residential.

**STAFF RECOMMENDATION:**
The proposed Preliminary Planned Development for a financial institution with a drive-through is incompatible with the surrounding residential properties. This proposal also conflicts with the Future Land Use Map recommendation that the property remains appropriate for single-family residential uses. Staff believes that the proposed would impact the surrounding residential uses by transitioning to a commercial use.

While Staff understands the growth needs for a commercial financial institution, the proposed location conflicts with the surrounding residential properties. The proposed would be more appropriately located on a commercial corridor. Therefore, Staff recommends denial of the proposed request. If the Planning and Zoning Commission recommends approval, Staff recommends the following conditions:

1. The Final Engineering Plans and Final Engineer's Cost Estimate shall be submitted and revised in a manner acceptable to the Village Engineer and Director of Planning and Zoning.
2. The final architectural and material elevation plans shall be submitted in a manner acceptable to the Village except as such plans shall be except as such plans may be revised to conform to Village Codes and Ordinances.
3. A revised landscaping and screening plan shall be submitted in a manner

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acceptable to the Director of Planning and Zoning and should include a significant landscaped buffer area on the west, south, and east sides of the property.

4. Review fees in the amount of 1.5% of the total project improvement costs (as defined in the Village Code) shall be submitted in a manner acceptable to the Village Engineer.
5. A Planned Development letter of credit shall be submitted in a manner acceptable to the Village Engineer and if required a Public Improvement letter of credit or appropriate security shall be submitted in a manner acceptable to the Village Engineer.
6. A construction management plan indicating the proposed material delivery routes and contractor parking areas, shall be submitted to the Village Engineer and Director of Planning and Zoning.
7. All required extra agency permits shall be submitted in manner acceptable to the Village Engineer.

**There were no further questions. The public hearing was closed.**

**Commissioner Friedman Made a motion to approve subject staff's conditions; seconded by Commissioner Noonan.**
**Vote:**
**Bettenhausen - No**
**Roth-Wurster - No**
**Wood - No**
**Friedman - No**
**Noonan - No**
**Fedota - No**

**Commissioner Noonan Made a motion to deny, seconded by Commissioner Roth-Wurster.**

**DELIBERATIONS:**
Commissioner Friedman stated that he appreciated the concerns expressed by the community and agreed that this location is not suitable for the proposed use.

Commissioner Fedota stated that while there are excellent elements to the request, he believes that the close proximity, size of the building, and surrounding environment is too much for the area and do not fit appropriately.

Chairman Wood stated that while acknowledging the petitioner as a great community partner, she shares the concerns of the neighbors. She further expressed her belief that the proposed development would have a negative impact on the surrounding community, citing concerns about noise, quality of life, and safety. Chairman Wood noted that if the area were zoned as commercial, the proposal might be more feasible, but as it is currently zoned residential, it does not align with the neighborhood's character.

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Commissioner Bettenhausen stated that the developer should have conducted due diligence in searching for property zoned for the requested use. Additionally, they should have undertaken further investigation into the options available for this request.

Commissioner Ruth-Wurster stated that she concurs with Chairman Wood's remarks. She emphasized that if the property were commercially zoned, the situation might be different. However, as the standards have not been met, she believes that the proposed development will cause substantial injury to the area and does not fit into the neighborhood. Commissioner Ruth-Wurster described the plan as good, but not suitable for this area.

**Chairman Wood summarized this request has not met the standards and was unanimously denied by a vote of 6-0. This item will tentatively go to Village Council on Monday April 8th, 2024.**

| | |
|---|---|
| **RESULT:** | **RECOMMEND TO DENY [UNANIMOUS]** |
| **MOVER:** | Patrick Noonan, Commissioner |
| **SECONDER:** | Cindy Roth-Wurster, Commissioner |
| **AYES:** | Noonan, Roth-Wurster, Friedman, Wood, Bettenhausen, Fedota |
| **ABSENT:** | Kolososki, Cavanaugh, Schubert |

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## IV. COMMUNICATIONS

## V. ADJOURNMENT

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VILLAGE OF PALATINE

**VILLAGE OF PALATINE**
**Planning and Zoning Commission**

**SCHEDULED 04/09/24 07:00 PM**

**STAFF REPORT (ID # 8991)**

# 1521 E. Reynolds Drive

**TO:** Palatine Planning and Zoning Commission
Jan Wood, Chair

**FROM:** Alex Bradshaw

**PETITIONER:** Brian Malinowski

**PLAN NUMBER:** VAR-000096-2024

## BACKGROUND:

The Subject Property is zoned R-2 Single Family and is part of the Winston Park Northwest Unit 1 Subdivision. The Subject Property is approximately 9,000 square feet and currently consists of a single-family residential home with a patio in the rear yard. The existing residence is currently set back approximately 44 feet from the rear lot line. Therefore, any meaningful addition to the rear of the residence would require would require zoning relief.

The Petitioner is proposing to construct an addition to their kitchen off the rear of the existing single-family residence. The proposed addition that would encroach into the required rear yard setback would be located off the southeast corner of the home, and would be approximately 30 feet from the rear property line. Therefore, the Petitioner is requesting:

> **Special use to permit a home addition to be set back 30 feet from the rear property line, instead of the minimum required 40 feet.**

Surrounding Zoning/Uses:

| | |
|---|---|
| North: | R-2 Single-Family Residential |
| South: | R-2 Single-Family Residential |
| East: | R-2 Single-Family Residential |
| West: | R-2 Single-Family Residential |

## KEY ISSUES:

- The Petitioner is seeking a Special Use to permit a 168-square foot addition to the rear of their existing residence to be set back approximately 30 feet from the rear lot line, instead of the required 40 feet. The proposed addition will not encroach into the required interior side yard setbacks.

- Part of the Petitioner's proposal also includes enclosing an exterior walkway from the garage to the living space within the residence, which is also detailed on the submitted site plan. This addition complies with all of the zoning setback requirements and will be pursued through a building permit as noted on the site plan.
- Both building and lot coverage are under the maximum percentage allowed by the Zoning Ordinance.
- Staff's review of the surrounding neighborhood did not identify any other properties that received relief for rear yard setbacks. However, there a few comparable existing non-conforming rear yard setbacks in the immediate surrounding area; 1434 E. Anderson Drive, 1417 E. Reynolds Drive, 1504 E. Reynolds Drive.

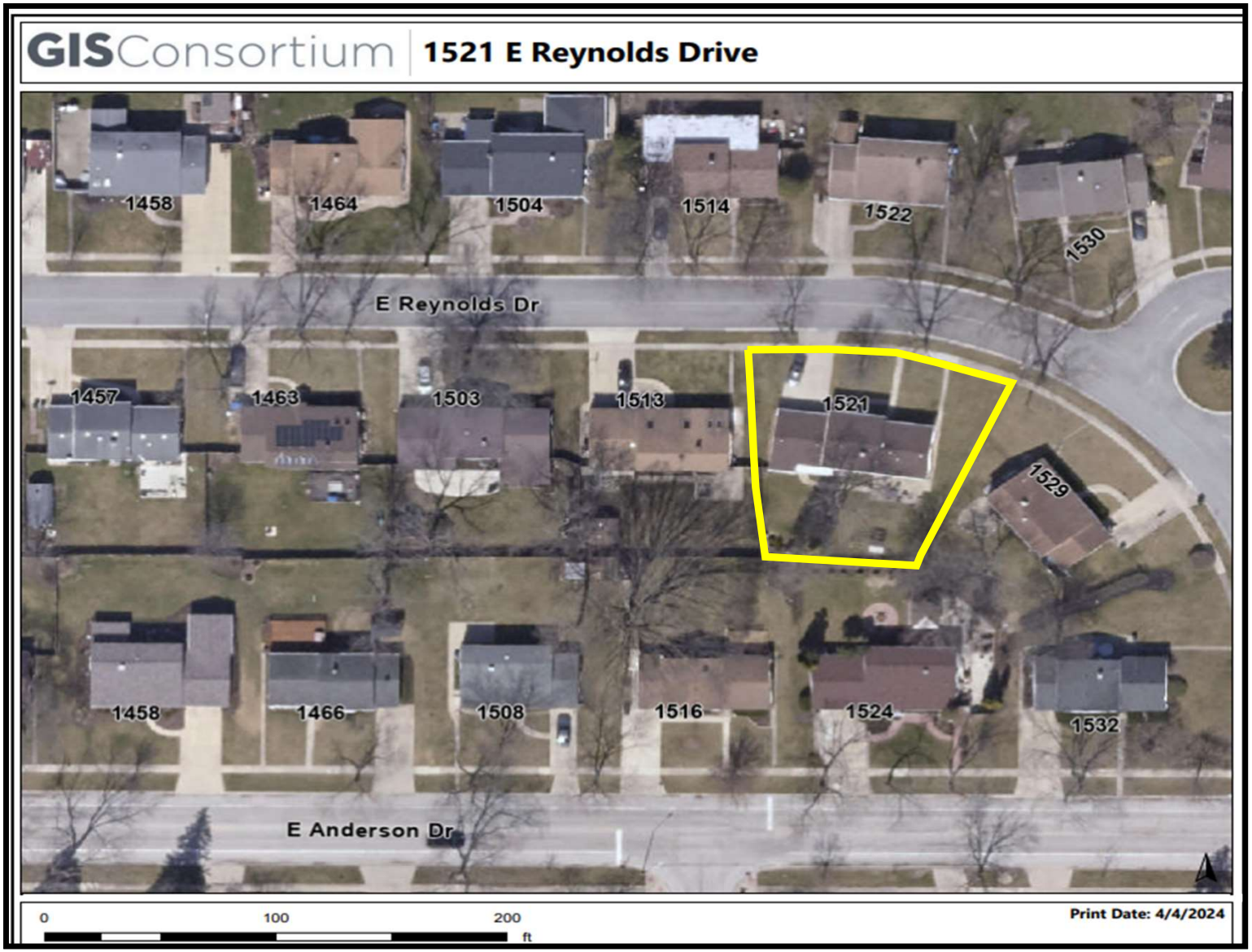
**STANDARDS FOR SPECIAL USE:** Since this Petition is not for a use publicly operated or traditionally affected with the public interest, those standards under Section 14.05 D (2) and (3) are applicable. Specifically, the Petitioners must show that the Special Use, if granted, is so designed, located, and proposed to be operated that the public health, safety, and welfare will be protected and will not cause substantial injury to the value of other property in the neighborhood in which it is located. The Petitioners have attempted to address the required standards.

**STAFF RECOMMENDATION:**
The Petitioner is proposing to construct an addition off the rear of their existing residence. The required 40-foot setback for the subject property and existing placement of the home would not permit a reasonably usable addition to the rear of the residence without zoning relief. Additionally, there are a few residences in the surrounding neighborhood with existing non-conforming rear yard setbacks that are comparable to the Petitioner's proposal. With that said, the addition should not cause substantial injury to the value of the other properties in the surrounding area. Therefore, Staff recommends approval of the requested Special Use, subject to the following condition:

1. The Special Use shall substantially conform to the Site Plan and Elevations submitted by the Petitioner, Brian Malinowski, except as such plans may be changed to conform to Village Codes and Ordinances.

**ATTACHMENTS:**

- Aerial Map
- Special Use Application
- Site Plan & Plat of Survey
- Elevations
- Public Notice




Attachment: Aerial Map (1521 E. Reynolds Drive - SU Addition Setback)

VILLAGE OF PALATINE

# SPECIAL USE APPLICATION

**Department of Planning & Zoning**
200 E. Wood Street · Palatine, IL · 60067-5339
Telephone: (847) 359-9047 · Fax (847) 963-6247

Petitioner Name

Brian Malinowski

Business Name (if applicable)

N/A

Subject Property Address

1521 E Reynolds Dr.

Please provide a description of your proposed request:

Building an extension off our kitchen in the backyard. Extending 10' into the 40' setback from the rear of the property. Second addition off back of garage that should not extend past the 40' setback from the back of the yard. Both additions will be at least 10' from property lines.

**Petitioner Justification**

Special Uses shall not be granted except on findings based upon the evidence in each specific case. Please address the following standards as these will be used in considering the specific relief you are seeking.

That use deemed necessary for the public convenience at that location. Explain:

N/A

The use is designed, located, and proposed to be operated that the public health, safety, welfare will be protected. Explain:

This are simple additions to existing structures in our backyard.

The use will not cause substantial injury to nearby property values. Explain:

More likely improve property values with additional square footage and storage.

Attachment: Special Use Application (1521 E. Reynolds Drive - SU Addition Setback)

In order to supplement the above standards, the Planning and Zoning Commission may also consider the following:

With respect to front yard fencing and fencing in a rear yard/side yard abutting a street, the following additional standards must be met:

a. Will meet the following aesthetic criteria:

i. Will not destroy existing vistas in the area;

ii. Will enhance the appearance of the homes and the streets in the area; and

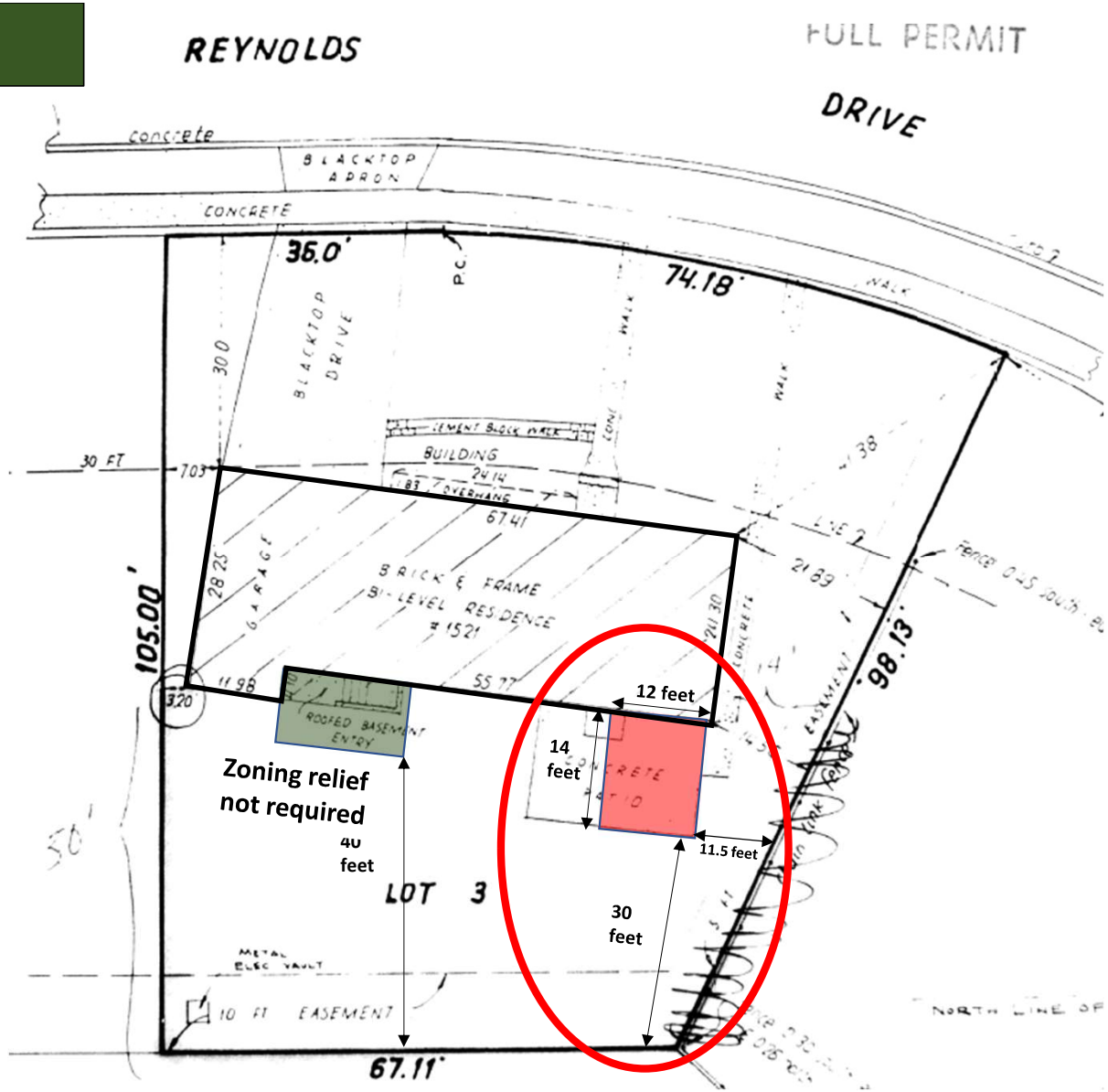
iii. Will not detract from the overall appearance of the community; or

b. The fencing is found to be necessary to protect private property or the safety of the inhabitants of the property.

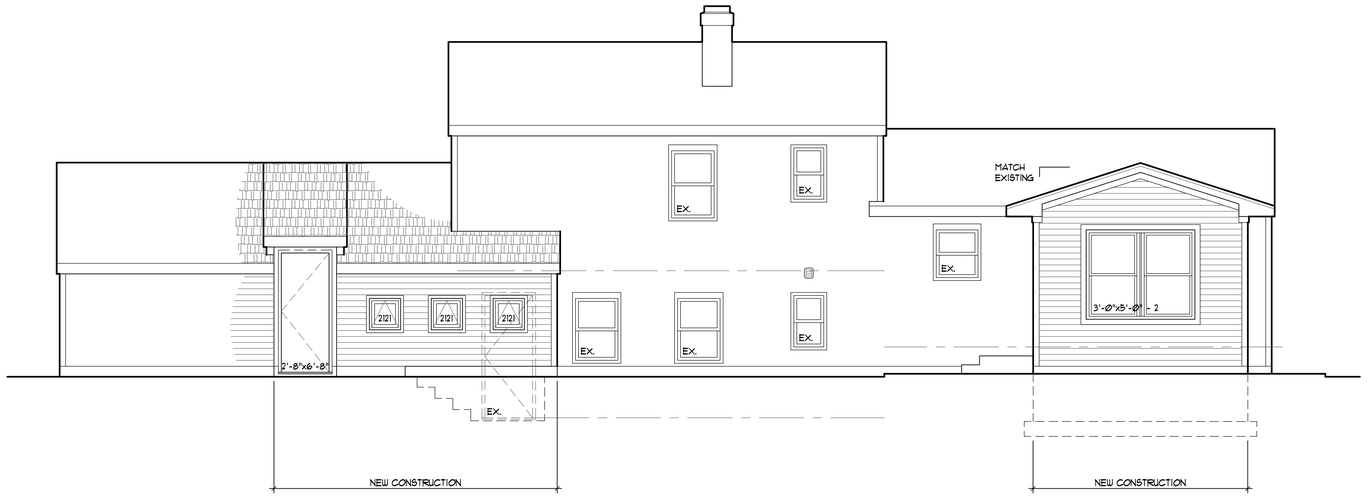
This is not a request for fencing

Attachment: Special Use Application (1521 E. Reynolds Drive - SU Addition Setback)

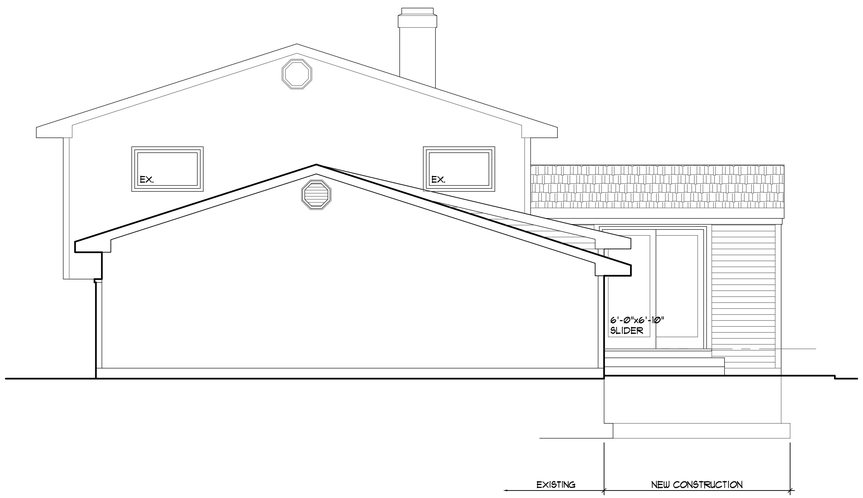
# Site Plan



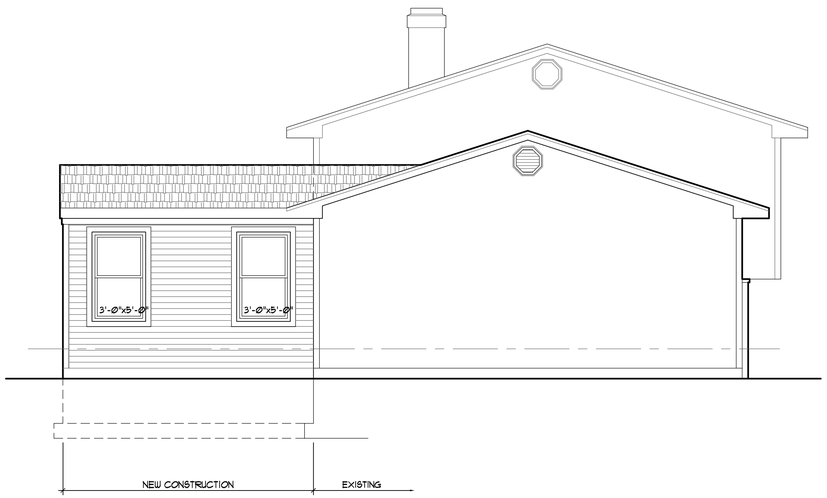

Attachment: Site Plan & Plat of Survey (1521 E. Reynolds Drive - SU Addition Setback)




# PROPOSED
# REAR ELEVATION




# PROPOSED
# WEST SIDE ELEVATION




# PROPOSED
# EAST SIDE ELEVATION

KIVLAND ARCHITECTS INCORPORATED

Project Title: Malinowski Remodel
Drawing Title: Proposed Elevations
Scale: 1/4" = 1'-Ø" Date: 3-25-24

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Attachment: Elevations (1521 E. Reynolds Drive - SU Addition Setback)

# CERTIFICATE OF PUBLICATION

**DES PLAINES JOURNAL, INC.,** a corporation organized and existing under and by virtue of the laws of the State of Illinois, does hereby CERTIFY that it is the publisher of the:

Journal & Topics Newspapers
AKA Des Plaines Journal, Inc.
622 Graceland Ave.
Des Plaines, IL 60016-4556

and that said newspaper(s) is a secular newspaper of general circulation and has been published weekly in the

(Village) (Town) (City) (Township) of PALATINE 1521 E REYNOLDS DR.

(●) ( ) ( ) ( )

County of COOK

and State of Illinois, continuously for more than one year prior to date of the first publication of the notice attached hereto, and that said newspaper(s) complies with the requirements of Paragraphs 5 and 10, Chapter 100, of the Illinois Revised Statutes.

Further, that the notice, of which the attached is a true copy, was published ONE times in the said newspaper(s), namely once each week for ONE successive week(s) and that the first publication of said notice was made on the 21ST day of MARCH, A.D. 20 24., and the last publication thereof was made on the 21ST day of MARCH, A.D. 20 24.

Your Legal appeared in the following Journal & Topics Newspapers (Des Plaines Journal, Inc.)

- ☐ Des Plaines Journal
- ☐ Elk Grove Village Journal
- ☐ Mt. Prospect Journal
- ☐ Niles Journal
- ☐ Park Ridge-Golf Mill Journal
- ☐ Prospect Heights Journal
- ☐ Rosemont Journal
- ☐ Arlington Heights Topics
- ☐ Buffalo Grove Topics
- ☑ Palatine Topics
- ☐ Rolling Meadows Topics
- ☐ Wheeling Topics
- ☐ Suburban Journal
- ☐ Northwest Journal
- ☐ Glenview Journal

"OFFICIAL SEAL"
MARY ALICE WENZL
NOTARY PUBLIC, STATE OF ILLINOIS
My Commission Expires 07/15/2025

Mary Alice Wenzl

IN WITNESS WHEREOF, **THE DES PLAINES JOURNAL, INC.,** has caused this certificate to be signed and its corporate seal affixed hereto at Des Plaines, Illinois this 21ST day of MARCH A.D., 20 24.

By Todd Wessell

President
Title of Corporate Officer

County of Cook
State of Illinois

Subscribed and sworn to before me this 21ST day of MARCH A.D., 20 24.

My commission expires the 15TH day of JULY A.D., 20 25.

Attachment: Public Notice (1521 E. Reynolds Drive - SU Addition Setback)

VILLAGE OF PALATINE

**VILLAGE OF PALATINE**
**Planning and Zoning Commission**

**SCHEDULED 04/09/24 07:00 PM**

**STAFF REPORT (ID # 8992)**

# 2240 - 2266 N. Rand Road

**TO:** Palatine Planning and Zoning Commission
Jan Wood, Chair

**FROM:** Lyn Bremanis

**PETITIONER:** Volodymyr Motkalyuk, Orest Express Inc.

**PLAN NUMBER:** FPD-000097-2024

## BACKGROUND:

The Subject properties, along with the surrounding properties fronting Rand Road, generally northwest of Rand and Hicks Roads up to Lake Cook Road, were annexed in 2007. Presently, the only remaining use on the property is a contractor's supply use, as a previous used car dealership vacated the property at the end of March. These properties, along with 2296 N. Rand Road, were approved as a Planned Development for a distribution and logistics' center in 2022 and the property was rezoned from B-5 (Highway Business - only Route 12/Rand Road properties) to Planned Development. However, ultimately this project never came to fruition.

The Petitioner is now requesting a new Planned Development and Plat of Consolidation, with a smaller building footprint and lot area. Orest Express Inc. plans to relocate their existing transportation and logistical solutions' facility from Elk Grove Village to the subject property. Therefore, the Petitioner is requesting:

1. **Final Planned Development to permit a logistics and distribution use, with accessory office uses; and**
2. **Final Plat of Subdivision to allow for the consolidation of six existing lots into one consolidated lot.**

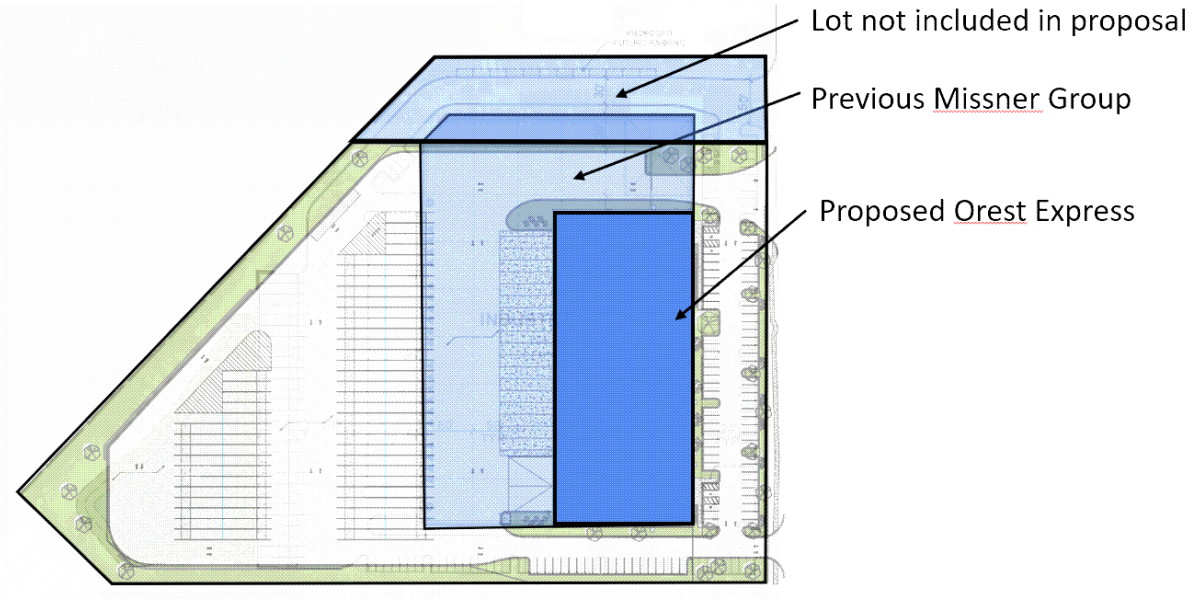
Surrounding Zoning/Uses:

| | |
|---|---|
| North: | B-5 Highway (Route 12) Business District - Palatine Motors |
| South: | B-5 Highway (Route 12) Business District - Enterprise Rental & Car Sales |
| East: | B-5 Highway (U.S. Route 12) Business District; Planned Development (Hyundai); and R-1 single-family residential (non-conforming through annexation in 2007). |
| West: | Unincorporated Cook County - Deer Grove Forest Preserve |

**KEY ISSUES:**

- Orest Express was founded in 2004 and is a provider of transportation services and logistical solutions. Orest specializes in moving freight between the Midwest and West Coast and, in addition to services in Chicago, Orest provides warehouse services in Salt Lake City, Utah and Reno, Nevada. Orest intends to develop the Subject Property for their new headquarter location. In addition to Orest's office uses, the building will provide warehouse space, truck parking, accessory repair to fleet vehicles, and serve as a distribution point for the company.
- Below is a comparison of the previously approved Planned Development versus what is currently being proposed by Orest Express Inc.:

| | Missner Group | Orest Express Inc. |
|---|---|---|
| Lot Size | 8.86 acres | 7.9 acres |
| Lot Frontage | 600 feet | 500 feet |
| Building Square Footage | 145,000 square feet | 58,000 square feet |
| Building Height | 41 feet | 30 feet |
| Parking Required/Provided | 179 spaces/ 145 spaces | 79 spaces/168 spaces |
| Front Yard Setback | 83 feet | 85 feet |




Site Plan Comparison

- The existing parking lots are improved with a variety of pavement, asphalt, and gravel. Between all of these properties, there are a total of 5 full access points onto Rand Road, which reflects the existing access conditions, prior to annexation. Rand Road is a State Route and IDOT controlled roadway and classified as a Strategic Regional Arterial Route, within this section of the Village.
- The proposed redevelopment will consolidate six parcels into one, with two access points, as part of the IDOT permitting requirements.
- The business plan indicates Orest Express Inc. is proposing to expand their existing business to include 40 employees and 75-80 drivers. The proposed hours of operation would be from 5 am - 7 pm, which includes office hours of 7 am - 5 pm.

**Engineering:**

- All of the existing utilities are proximate and available to the Subject Property along Rand Road.
- The storm sewer would be extended through the site with connections to catch basins and roof drains. Stormwater would be collected and managed by proposed underground stormwater management vault located in the southwest corner, under the paved rear parking lot. The stormwater outfall/tributary connects to the adjacent Forest Preserve and, ultimately, Buffalo Creek.

**Architecture:**

- The proposed building shares similar materials and construction as the previously approved building, with the exception that it would be 11 feet shorter, at a height of 30 feet, and 60% smaller, at 58,000 square feet (vs. 145,000 for the Missner Planned Development). The elevations include concrete spandrel panels, precast concrete, and spandrel-tempered/vision glass components. Within the 58,000 square foot building, there are initially 7,100 square feet of office uses proposed.
- The maximum building height of 30 feet to the top of the parapet, complies with the B-5 district requirements. The maximum height allowed in the B-5 district is 3 stories, not to exceed 45 feet. The initial floorplan indicates an open-style layout, with a 25-foot clear height within the building and the potential future addition of a second floor over the proposed office areas.
- All proposed setbacks exceed the minimum required within the B-5. A 10-foot landscaped area along Rand Road is proposed, which is comparable to the

landscaped front yard for Hyundai of Palatine, directly across Rand Road.

- With approximately 500 feet of frontage along Rand Road, 12 trees in the parkway would be required. However, 8 trees are proposed, with additional plantings within the parking lot islands and along the periphery of the site.

**Traffic Analysis:**

- The Subject Property has direct access to Rand Road (U.S. Route 12 - IDOT jurisdiction) and lies approximately 500 feet southeast of Lake Cook Road. This includes an existing barrier median for approximately 700 feet south of Lake Cook Road, which impacts the two existing northern access points. Per the submitted Traffic Impact Statement (TIS), Rand Road is a Strategic Regional Arterial Route and has a posted speed limit of 35 miles per hour, and carries an annual average daily traffic (AADT) volume of 41,600 vehicles northwest of Lake Cook Road and 24,600 vehicles southeast of Lake Cook Road.

- Lake Cook Road is an east-west, principal arterial roadway that provides two lanes in each direction. Lake Cook Road is under the jurisdiction of the Cook County Highway Department and has a posted speed limit of 45 miles per hour, and carries an AADT volume of 17,200 vehicles west of Rand Road and 39,900 vehicles east of Rand Road.

- Below is a comparison of the proposed daily trips from this site:

| | Missner Group | Orest Express |
|---|---|---|
| Weekday Morning Total | 103 | 43 |
| Weekday Evening Total | 94 | 43 |
| Daily Trips In | 299 | 60 |
| Daily Trips Out | 299 | 60 |
| Total Daily Trips | 598 | 120 |

- The TIS (Traffic Impact Study) concludes the following:

  1. The traffic generated by the proposed facility is anticipated to result in less than a 1% increase from existing levels.
  2. The majority of truck traffic will be long distance, reducing daily truck traffic.
  3. The proposed access drives will accommodate traffic entering and exiting

the site.

4. Reduction of access drives will decrease traffic conflicts and improve the safety of the traffic flow on Rand Road.

**Parking:**

- The proposed parking lot will include 83 typical parking spaces (this includes 4 handicap spaces), 85 trailer spaces and 18 truck docking spaces. This exceeds the required parking requirements of 85 spaces and should accommodate for the need per the business plan.

**STANDARDS FOR PLANNED DEVELOPMENT:** Standards for a Planned Development are found in Section 13.03 (a) of the Zoning Code. Specifically, the planned development shall be designed, located and proposed to be operated so that the public health, safety and welfare will be protected. The planned development shall not cause substantial injury to the value of other property in the area in which it is located. The establishment of the planned development shall not impede the normal and orderly development and improvement of surrounding property. Adequate utilities, access roads, drainage and/or other necessary facilities have been or are being provided. And adequate measures have been or will be taken to provide ingress and egress so designed as to minimize traffic congestion in the public streets.

**STAFF RECOMMENDATION:**
The property was previously approved as a Planned Development for a distribution center in 2022, however, the project was never pursued. The Petitioner's proposed plans and use of the property are similar to the previously approved uses, and would relocate the existing transportation and logistical solutions facility to the Village. The current proposal features a reduced building footprint (square footage and height) and the traffic impact study indicates a lower daily volume. Additionally, Staff agrees that the proposed Planned Development complies with the required Planned Development Standards and Design Standards. Therefore, Staff recommends approval of the Preliminary and Final Planned Development and Preliminary and Final Plat of Subdivision, subject to the following conditions:

1. The development shall substantially conform to the engineering plans by Spaceco INC., dated February 19, 2024 and the architectural plans by Thomas Architects, dated February 20, 2024, except as such plans may be changed to conform to Village Codes and Ordinances.

2. The Final Plat of Subdivision shall be submitted on Mylar with the required signatures and significantly conform to the Plat of Subdivision in a manner acceptable to the Village Engineer.
3. The Final Engineering Plans shall be revised in a manner acceptable to the Village Engineer, including the Final Engineer's Cost Estimate which shall be submitted in a manner acceptable to the Village.
4. Uses shall be governed by the B-5 Highway Business District use lists in the Village of Palatine Zoning Ordinance. In addition, the following uses shall also be permitted uses; Cartage or express establishments, Warehousing and distribution centers, and related office uses. Any use of the property shall also be subject to the required performance standards in the Village's Zoning Code. Any signage shall comply with the regulations in the Village's B-5 District.
5. The final landscape plans shall be submitted/revised in a manner acceptable to the Director of Planning and Zoning.
6. The final photometric and lighting plan shall be revised in a manner acceptable to the Village Engineer.
7. The final traffic directional signage plan shall be submitted in a manner acceptable to the Village Engineer.
8. If required by the Village Attorney, declarations shall be submitted in a manner acceptable to the Village Attorney. This could include a cross access easement for the property directly north of the Subject Property, if that property were to redevelop in the future, if requested by the Village of Palatine.
9. A Public Improvement letter of credit shall be submitted in a manner acceptable to the Village Engineer.
10. Review fees, in the amount of 1.5% of the total project improvement costs (as defined in the Village Code) based upon the finally accepted EEOPC shall be submitted in a manner acceptable to the Village Engineer.
11. A Subdivision Improvement Agreement shall be submitted in a manner acceptable to the Village Attorney.
12. A Planned Development letter of credit shall be submitted in a manner acceptable to the Director of Planning and Zoning.
13. All required extra agency permits (e.g., MWRD WMO, IDOT and IEPA Sewer and Water) shall be submitted in a manner acceptable to the Village Engineer.
14. A construction management plan, indicated the proposed material delivery routes and contractor parking areas, shall be submitted to the Village Engineer.

15. Recording fees in the amount of $600 shall be submitted.

**ATTACHMENTS:**

- Aerial Map
- Project Narrative
- Final Engineering Plans
- Final Architectural Plans
- Landscape Plan
- Plat of Subdivision
- Traffic Study
- Application
- Plat of Survey
- O-69-22 Missner Planned Development
- Public Notice

GISConsortium

# 2240 - 2266 N Rand Road

0 200 400 ft

Print Date: 3/29/2024

Notes

*Disclaimer: The GIS Consortium and MGP Inc. are not liable for any use, misuse, modification or disclosure of any map provided under applicable law. This map is for general information purposes only. Although the information is believed to be generally accurate, errors may exist and the user should independently confirm for accuracy. The map does not constitute a regulatory determination and is not a base for engineering design. A Registered Land Surveyor should be consulted to determine precise location boundaries on the ground.*

Attachment: Aerial Map (2240 - 2266 N. Rand Road - FPD Distribution Use)

THOMAS ARCHITECTS
www.thomasarch.com

February 16, 2024

Village of Palatine
Planning & Zoning Commission
200 E Wood St
Palatine, IL 60067

**Re: Project Narrative – PD Amendment**
**Orest Express Logistics Center**
**2240 - 2266 N Rand Rd, Palatine, IL**

Dear Board Members:

We are pleased to submit for the board's review, the Planned Development amendment for the site located at 2240 - 2266 N Rand Rd, Palatine, IL. This cover letter shall serve as the Project Narrative describing the proposed development, end user and their business operations.

The original Planned Development submittal for this property was approved by the Plan Commission at their meeting on June 21st, 2022. The original submittal included a +/-145,000 SF, 41' high spec industrial building on a 8.86 acre site on a 600' frontage along Rand Road (2240 – 2296 N Rand Rd). The amended submittal is for a +/-58,000 SF, 30' high office and logistics center building for the contract purchaser, Orest Express, Inc on a 7.9 acre site on a 500' frontage along Rand Rd (2240 – 2266 N Rand Rd). The proposed development is on the southern 500' frontage of the original submittal.

## Project Narrative

### Site Description

The site is approximately 7.9 acres (344,402 SF) located along the west side of N Rand Rd, just south of W Lake Cook Rd. The site is currently improved with a number of smaller industrial and commercial buildings, and almost entirely covered with impervious surfaces. All of the existing buildings on the site will be razed as part of this project. The proposed development will include a 1-story industrial building set back 85' from the NE property line.

Access to the site will be via (2) separate right-in, right-out curb cuts located at the north and south ends of the property. Tractor and trailer ingress and egress will be limited to the north curb cut. Employee parking will be located along the front of the building. The rear of the building will



2800 S River Rd, Suite 305
Des Plaines, IL 60018
O| 877 . 205 . 3799

Attachment: Project Narrative (2240 - 2266 N. Rand Road - FPD Distribution Use)

be used for trailer parking, 18 loading docks and 3 at grade overhead doors. All truck maneuvering will be on site, with the majority of it located behind the building. The site will include a total of 83 passenger vehicle parking spaces (4 ADA spaces) and 86 trailer parking spaces. All trailer parking spaces will be located behind the building. The provided passenger vehicle parking spaces exceeds the zoning requirements for parking. It should also be noted that at capacity, Orest Express, expects a total employee count of approximately 40 at this location, and their need for vendor or customer parking is very small. KLOA provided the original traffic study for this site and has also provided an amended letter for this user indicating that "the facility generated trips will increase the two-way traffic volume along Rand Road by less than one percent daily."

The rear lot will be largely impervious, used for trailer parking. Stormwater management shall be provided via underground storm water detention structures located in the rear lot. All surface drainage on the lot and from the building roof shall be directed to this storm water detention structure as indicated on the proposed Civil Engineering plans provided by SpaceCo.

The site has a natural grade drop off from east to west. The front entrances and parking lot will be approximately at grade 761' while the rear of the building will be approximately at grade 758'. This will allow for loading docks along the rear of the building with minimal grad change. There will be a concrete ramp to access 3 overhead doors at the south west end of the building. A landscape block retaining wall is planned at the far west side of the rear lot with a max height of approximately 6'. Vehicle barriers shall be provided at the top of the wall.

The rear lot will be entirely enclosed by an 8' tall metal security fence. A motorized roller type gate shall be located at the north and south drive aisles. The truck entrance shall be limited to the north drive aisle. The gate along the south drive aisle will be limited to passenger vehicle, emergency and refuse truck access only. The gate is located to allow for stacking of 1 tractor trailer without interfering with access to the front parking lot.

In addition to the items noted above, the rear lot will include a truck scale, a masonry trash enclosure and a fuel pump station. The fuel pump will be accessory to the building use and not for commercial use.

The landscaping will consist of perimeter landscaping along the vehicular use areas, foundation landscaping and interior landscape islands at the front parking lot. The landscaping has been designed so as to provide adequate screening of the rear yard and to enhance the aesthetic of the building architecture. Site lighting will consist of wall mounted lighting around the building perimeter and 35'H light poles at the rear lot. A photometric plan has been provided.

Proposed Building

The proposed building consists of a 1-story, 30' high precast concrete building of approximately 58,000 SF. The building will consist of +/- 7,100 SF of office space, +/-11,000 SF dedicated to truck repair and parts storage, and the remaining +/-38,000 SF as general warehouse space. There will be a 5,500 SF office space located at the north end of the building. This space will serve as the



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Attachment: Project Narrative (2240 - 2266 N. Rand Road - FPD Distribution Use)

primary office space for Orest Express, including administrative offices, executive offices and dispatch. There will be an additional 1,600 SF of office space at the south end of the building. This area will serve as the offices for maintenance staff and as the entrance for warehouse employees. Truck repair, maintenance and parts storage will be located in the south half of the building. This area will be accessed via (3) overhead doors off of the rear of the property. The area will serve as a fleet maintenance area for both tractors and trailers, and not for commercial use. No bodywork or painting is planned at this time. The remaining portion of the building will be general warehouse space with a shipping office and trucker lounge located in the far northwest corner of the building. The warehouse will include (18) loading dock doors. No racking is planned at this time in the warehouse.

The exterior aesthetic of the building is intended to clean and contemporary reflecting the values of Orest Express, and to serve as a clearly identifiable headquarters for their business. The front façade consists of precast panel construction with a large glazed and inset portion of the building at the north and east sides of the building marking the primary entrance to the building. There are 2 additional glazed portions of the building at the executive offices and at the southern maintenance and warehouse employee entrance. Varying punched window openings are used along the façade to bring in natural daylight into the office spaces as wall as taller windows to bring light into the warehouse spaces. The material palette consists of painted precast, small sections of metal panel, and aluminum storefront. The color palette consists of various grays in the painted precast, black, and orange accents based on the Orest Express corporate branding colors. The painted precast color scheme and high windows extend along the sides and rear of the building.

The building will be precast concrete and steel barjoist construction with an approximate clear height of 25'. The building will be fully sprinklered with fire alarm as required by the Village. No racking is planned within the warehouse. The items stored within the warehouse will fall within the category of S-1 moderate hazard storage.

Building Operations

Orest Express is an asset based transportation company providing Dry freight transportation and warehousing services between Midwest and West Coast regions. They are currently operating out of a facility in Elk Grove Village and will be moving their entire Chicago based operations to this new proposed facility.

Their hours of operation are Monday – Friday, 5 am to 7 pm, with their office open from 7 am to 5 pm. They currently have 20 employees comprised of 14 office employees, 3 warehouse employees and 3 maintenance employees. They currently work with a total of 50 drivers of which 6 are regional, 40 are OTR / Long Distance and 4 are Reno Local. The proposed facility will allow Orest Express to expand their business, with anticipated doubling of their employees and increased driver head count to 75 – 80.

Their 6 regional trucks typically leave between 5 am and 7 am every day and return between 5 pm and 7 pm. Their OTR / Long Distance drivers return to the facility every 7 – 14 days depending



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Attachment: Project Narrative (2240 - 2266 N. Rand Road - FPD Distribution Use)

on their route and hours of service. As value added services OREST Express provides trailer pool services to their customers and drop trailers for more flexibility. That being said they have more trailers than trucks in their fleet.

The proposed facility will include a truck repair and maintenance area. This will be dedicated to fleet repairs only and not for commercial use. The maintenance area will include a secure parts storage, incidental hazardous material storage and trench drains with triple basin / oil separator.

The warehouse portion of the building will not include racking storage at this time as it is not ideal for their current use. The office portion is designed for their future capacity of 40 total employees with additional room for expansion via a future mezzanine.

Should you have any questions, please feel free to contact us. We appreciate your consideration in this matter.

Sincerely,

**Thomas Architects**

Thomas Budzik, AIA

Attachment: Project Narrative (2240 - 2266 N. Rand Road - FPD Distribution Use)



2800 S River Rd, Suite 305
Des Plaines, IL 60018
O| 877 . 205 . 3799

# FINAL SITE IMPROVEMENT PLANS
for
# OREST EXPRESS
# NEW TRUCK TERMINAL
## 2240 RAND ROAD
## VILLAGE OF PALATINE
## COOK COUNTY, ILLINOIS
## PROJECT NO: 11624.03

**OREST EXPRESS**
**VILLAGE OF PALATINE**
**COOK COUNTY, ILLINOIS**


**OWNER**
OREST EXPRESS INC
221 JOEY DRIVE
ELK GROVE VILLAGE, IL 60007
PH: (630) 376-6373
CONTACT: VLAD MOTKALYUK

**ARCHITECT**
THOMAS ARCHITECTS
2800 S RIVER RD, SUITE 305
DES PLAINES, IL 60018
PH: (847) 235-6980
CONTACT: THOM BUDZIK

**LANDSCAPE ARCHITECT**
KM TALTY
1926 WAUKEGAN ROAD, SUITE 340
GLENVIEW, IL 60025
PH: (847) 612-5154
CONTACT: KATHRYN TALTY


**CALL J.U.L.I.E. 1-800-892-0123**
**WITH THE FOLLOWING:**
COUNTY: COOK COUNTY
CITY, TOWNSHIP: VILLAGE OF PALATINE, PALATINE
SEC. & ¼ SEC. NO.: NW 1/4 S2, T42N, R10E
**48 HOURS BEFORE YOU DIG.**
**EXCLUDING SAT., SUN. & HOLIDAYS**

**BENCHMARK**
ELEVATION:
DESCRIPTION: SEE SHEET ET FOR BENCHMARK INFORMATION

**NOTE:**
SPACECO, INC. IS TO BE NOTIFIED AT LEAST THREE (3) DAYS PRIOR TO STARTING CONSTRUCTION AND SHALL BE INCLUDED IN THE PRECONSTRUCTION MEETINGS

DRAINAGE CERTIFICATE

TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE DRAINAGE OF SURFACE WATERS WILL NOT BE CHANGED BY THE PROPOSED DEVELOPEMENT. IF ANY DRAINAGE PATTERNS WILL BE CHANGED, REASONABLE PROVISIONS HAVE BEEN MADE FOR THE COLLECTION AND DIVERSION OF SUCH SURFACE WATERS IN TO THE PUBLIC AREA, OR DRAINS APPROVED FOR THE USE BY THE MUNICIPAL ENGINEER, AND THAT SUCH SURFACE WATERS ARE PLANNED FOR IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES SO AS TO REDUCE THE LIKELIHOOD OF DAMAGES TO ADJOINING PROPERTIES.

OWNER OR ATTORNEY

DESIGN ENGINEER

## REVISIONS

ORIGINAL PLAN DATE: FEBRUARY 16, 2024

| # | SHEET # | REMARKS | DATE |
|---|---|---|---|
| 1 | ALL | REVISIONS PER ARCHITECT AND STORMTRAP | 02/21/24 |

## INDEX


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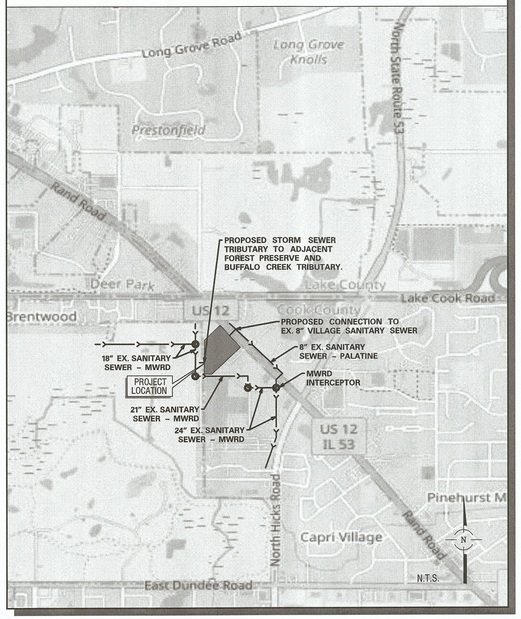
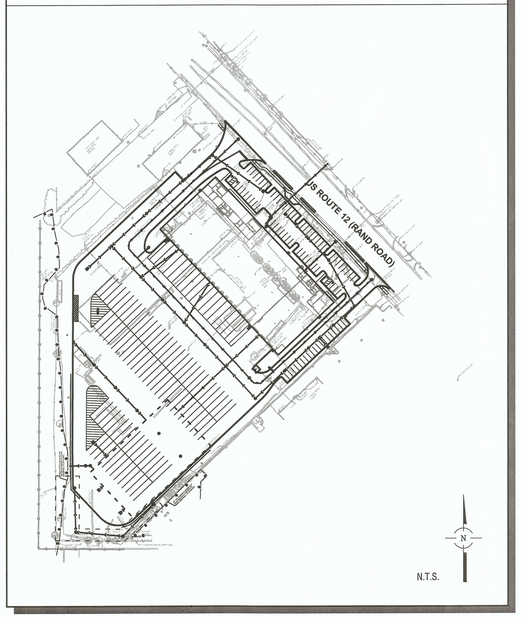
## SANITARY SEWER ROUTING MAP




## KEY MAP




ENGINEER
BRIAN C. RATAJCZAK, P.E.
ILLINOIS REGISTRATION NO.: 062-053203
EXPIRATION DATE: 11/30/2025

PROFESSIONAL DESIGN FIRM NO.: 184-001157
EXPIRATION DATE: 04/30/2025

THESE PLANS OR ANY PART THEREOF SHALL BE CONSIDERED VOID WITHOUT THE SIGNATURE, SEAL, AND EXPIRATION DATE OF SEAL OF THE ENGINEER

February 21, 2024
DATE

LICENSED PROFESSIONAL ENGINEER
BRIAN C. RATAJCZAK
062-053203
OF ILLINOIS

**NOT FOR CONSTRUCTION**


9575 W. Higgins Road, Suite 700, Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

SPACECO INC.


FILENAME: 11624.03TITLE
DATE: 02/16/2024
JOB NO. 11624.03
SHEET C1
1 OF 23

N:\Projects\11624\11624.03-JLL\ENG\11624.03TITLE.dgn Default User=gwagner

Attachment: Final Engineering Plans (2240 - 2266 N. Rand Road - FPD Distribution Use)

## GENERAL NOTES

1. REFERENCED CODES

A. ALL PAVEMENT AND STORM SEWER CONSTRUCTION SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (SSRBC), AND SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS; ADOPTED APRIL 1, 2016 BY ILLINOIS DEPARTMENT OF TRANSPORTATION AND ALL AMENDMENTS THERETO; AND IN ACCORDANCE WITH THE LATEST EDITION OF THE CODE OF THE MUNICIPALITY; EXCEPT AS MODIFIED HEREIN. IN CASE OF CONFLICT, MUNICIPAL CODE SHALL TAKE PRECEDENCE.

B. ALL SANITARY SEWER AND WATERMAIN CONSTRUCTION SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS. PUBLISHED JANUARY 2014, AND IN ACCORDANCE WITH THE CODE OF THE MUNICIPALITY; EXCEPT AS MODIFIED HEREIN OR BY ANY PUBLIC AGENCY PERMITS ISSUED FOR THIS WORK. IN CASE OF CONFLICT, THE MORE RESTRICTIVE PROVISIONS SHALL APPLY.

C. ALL SIDEWALK AND PUBLIC AREAS MUST BE CONSTRUCTED IN ACCORDANCE WITH CURRENT ADA, ILLINOIS HANDICAP ACCESSIBILITY AND ANY APPLICABLE LOCAL ORDINANCES. WHEN CONFLICTS EXIST BETWEEN THE GOVERNING AGENCIES, THE MORE STRINGENT SHALL GOVERN.

D. THE CITED STANDARD SPECIFICATIONS, CODES AND PERMITS, WITH THESE CONSTRUCTION PLANS AND DETAILS, ARE ALL TO BE CONSIDERED PART OF THE CONTRACT. INCIDENTAL ITEMS OR ACCESSORIES NECESSARY TO COMPLETE THIS WORK MAY NOT BE SPECIFICALLY NOTED BUT ARE CONSIDERED A PART OF THIS CONTRACT.

2. UTILITY LOCATIONS

A. THE UTILITY COMPANIES HAVE BEEN CONTACTED IN REFERENCE TO UTILITIES THEY OWN AND OPERATE WITHIN THE LIMITS FOR THIS PROJECT. DATA FROM THESE AGENCIES HAS BEEN INCORPORATED INTO THE PLANS, IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM OR ESTABLISH THE EXISTENCE OF ALL UTILITY FACILITIES AND THEIR EXACT LOCATIONS, AND TO SAFELY SCHEDULE ALL UTILITY RELOCATIONS. FOR ADDITIONAL INFORMATION, THE AGENCIES LISTED ON THIS SHEET MAY BE CONTACTED.

B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING THE UTILITY COMPANIES LOCATE THEIR FACILITIES IN THE FIELD PRIOR TO CONSTRUCTION AND SHALL ALSO BE RESPONSIBLE FOR THE MAINTENANCE AND PRESERVATION OF THESE FACILITIES. THE ENGINEER DOES NOT WARRANT THE LOCATION OF ANY EXISTING UTILITIES SHOWN ON THE PLAN. THE CONTRACTOR SHALL CALL J.U.L.I.E. AT 800-892-0123 AND THE MUNICIPALITY, FOR UTILITY LOCATIONS. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES AND THE MUNICIPALITY TWENTY-FOUR (24) HOURS PRIOR TO STARTING ANY CONSTRUCTION.

C. EASEMENTS FOR THE EXISTING UTILITIES, BOTH PUBLIC AND PRIVATE, AND UTILITIES WITHIN PUBLIC RIGHTS-OF-WAY ARE SHOWN ON THE PLANS ACCORDING TO AVAILABLE RECORDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION IN THE FIELD OF THESE UTILITY LINES AND THEIR PROTECTION FROM DAMAGE DUE TO CONSTRUCTION OPERATIONS. IF EXISTING UTILITY LINES OF ANY NATURE ARE ENCOUNTERED WHICH CONFLICT WITH LOCATIONS OF THE NEW CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER SO THAT THE CONFLICT MAY BE RESOLVED.

3. UTILITY COORDINATION

A. OWNER SHALL OBTAIN EASEMENTS AND PERMITS NECESSARY TO FACILITATE CONSTRUCTION OF THE PROPOSED UTILITIES. THE CONTRACTOR, HOWEVER, SHALL FURNISH ALL REQUIRED BONDS AND EVIDENCE OF INSURANCE NECESSARY TO SECURE THESE PERMITS.

B. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE NATURE AND STATUS OF ALL UTILITY RELOCATION WORK PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL TAKE APPROPRIATE MEASURES TO ENSURE THAT CONSTRUCTION OPERATIONS DO NOT INTERFERE WITH UTILITY FACILITIES AND RELOCATION WORK. THE SCHEDULE SHOULD REFLECT CONSTRUCTION SEQUENCING WHICH COORDINATES WITH ALL UTILITY RELOCATION WORK. THE CONTRACTOR SHALL BE REQUIRED TO ADJUST THE ORDER OF ITS WORK FROM TIME TO TIME, TO COORDINATE SAME WITH UTILITY RELOCATION WORK, AND SHALL PREPARE REVISED SCHEDULE(S) IN COMPLIANCE THEREWITH AS DIRECTED BY THE OWNER.

C. THE OWNER AND THE ENGINEER SHALL BE NOTIFIED IN WRITING BY THE CONTRACTOR AT LEAST 48 HOURS PRIOR TO THE START OF ANY OPERATION REQUIRING COOPERATION WITH OTHERS. AT&T SHALL BE CONTACTED ONE MONTH PRIOR TO START OF CONSTRUCTION IN ITS UTILITY AREAS. ALL OTHER AGENCIES, UNLESS OTHERWISE NOTED, SHALL BE NOTIFIED IN WRITING BY THE CONTRACTOR TEN (10) DAYS PRIOR TO THE START OF ANY SUCH OPERATION.

4. NO PLAN SHALL BE USED FOR CONSTRUCTION UNLESS SPECIFICALLY MARKED "FOR CONSTRUCTION". PRIOR TO COMMENCEMENT OF CONSTRUCTION THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AFFECTING THE WORK WITH THE ACTUAL CONDITIONS AT THE JOB SITE. IN ADDITION, THE CONTRACTOR MUST VERIFY THE ENGINEER'S LINE AND GRADE STAKES. IF THERE ARE ANY DISCREPANCIES WITH WHAT IS SHOWN ON THE CONSTRUCTION PLANS, HE MUST IMMEDIATELY REPORT SAME TO ENGINEER BEFORE DOING ANY WORK, OTHERWISE THE CONTRACTOR ASSUMES FULL RESPONSIBILITY. IN THE EVENT OF DISAGREEMENT BETWEEN THE CONSTRUCTION PLANS, SPECIFICATIONS AND/OR SPECIAL DETAILS, THE CONTRACTOR SHALL SECURE WRITTEN INSTRUCTION FROM THE ENGINEER PRIOR TO PROCEEDING WITH ANY PART OF THE WORK AFFECTED BY OMISSIONS OR DISCREPANCIES. FAILING TO SECURE SUCH INSTRUCTION, THE CONTRACTOR WILL BE CONSIDERED TO HAVE PROCEEDED AT HIS OWN RISK AND EXPENSE. IN THE EVENT OF ANY DOUBT OR QUESTIONS ARISING WITH RESPECT TO THE TRUE MEANING OF THE CONSTRUCTION PLANS OR SPECIFICATIONS, THE DECISION OF THE ENGINEER SHALL BE FINAL AND CONCLUSIVE.

5. ALL PROPOSED ELEVATIONS SHOWN ON THE PLANS ARE FINISHED SURFACE ELEVATIONS, UNLESS OTHERWISE SPECIFIED.

6. UPON AWARDING OF THE CONTRACT, AND WHEN REQUIRED BY THE MUNICIPALITY OR OWNER, THE CONTRACTOR SHALL FURNISH A LABOR, MATERIAL AND PERFORMANCE BOND IN THE AMOUNT REQUIRED GUARANTEEING COMPLETION OF THE WORK. THE UNDERWRITER SHALL BE ACCEPTABLE TO THE MUNICIPALITY OR OWNER, AS APPROPRIATE.

7. THE CONTRACTORS SHALL PLAN THEIR WORK BASED ON THEIR OWN BORINGS, EXPLORATIONS AND OBSERVATIONS TO DETERMINE SOIL CONDITIONS AT THE LOCATION OF THE PROPOSED WORK. HOWEVER, IF THE OWNER HAS A SOILS REPORT, THE RESULTS WILL BE AVAILABLE FROM THE OWNER UPON WRITTEN REQUEST.

8. CONTRACTOR SHALL VIDEO TAPE WORK AREA PRIOR TO CONSTRUCTION FOR THE PURPOSE OF DOCUMENTING EXISTING CONDITIONS.

9. COMMENCING CONSTRUCTION

A. THE CONTRACTOR SHALL NOTIFY THE OWNER AND/OR HIS REPRESENTATIVE AND THE AFFECTED GOVERNMENTAL AGENCIES IN WRITING AT LEAST THREE FULL WORKING DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION. IN ADDITION, THE CONTRACTOR SHALL NOTIFY AS NECESSARY, ALL TESTING AGENCIES, EITHER MUNICIPALITY'S OR THE OWNER'S, SUFFICIENTLY IN ADVANCE OF CONSTRUCTION, ALL MATERIAL TESTING SHALL BE THE RESPONSIBILITY AND EXPENSE OF THE CONTRACTOR. THE TESTING AGENCY SHALL MEET THE APPROVAL OF THE OWNER.

B. FAILURE OF CONTRACTOR TO ALLOW PROPER NOTIFICATION TIME WHICH RESULTS IN TESTING COMPANIES TO BE UNABLE TO VISIT SITE AND PERFORM TESTING WILL CAUSE CONTRACTOR TO SUSPEND OPERATION (PERTAINING TO TESTING) UNTIL TESTING AGENCY CAN SCHEDULE TESTING OPERATIONS. COST OF SUSPENSION OF WORK TO BE BORNE BY CONTRACTOR.

10. ALL CONTRACTORS SHALL KEEP ACCESS AVAILABLE AT ALL TIMES FOR ALL TYPES OF TRAFFIC. AT NO TIME SHALL ACCESS BE DENIED TO ADJACENT PROPERTIES.

11. THE CONTRACTOR SHALL PRESERVE ALL CONSTRUCTION STAKES UNTIL THEY ARE NO LONGER NEEDED. ANY STAKES DESTROYED OR DISTURBED BY THE CONTRACTOR PRIOR TO THEIR USE SHALL BE RESET BY THE DEVELOPER'S ENGINEER AT CONTRACTOR'S COST.

12. ANY EXISTING SIGNS, LIGHT STANDARDS AND UTILITY POLES WHICH INTERFERE WITH CONSTRUCTION OPERATIONS AND NOT NOTED FOR DISPOSAL SHALL BE REMOVED AND RESET BY THE CONTRACTOR AT HIS OWN EXPENSE AS SHOWN ON THE ENGINEERING PLANS OR AS DIRECTED BY THE DEVELOPER. ANY DAMAGE TO THESE ITEMS SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT HIS OWN EXPENSE TO THE SATISFACTION OF THE OWNER. ANY SIGNS NOT REQUIRED TO BE RESET, SHALL BE DELIVERED TO THE RESPECTIVE OWNERS.

13. REMOVAL OF SPECIFIED ITEMS, INCLUDING BUT NOT LIMITED TO, PAVEMENT, SIDEWALK, CURB, CURB AND GUTTER, CULVERTS, ETC. SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR AT HIS OWN EXPENSE. HE IS RESPONSIBLE FOR ANY PERMIT REQUIRED FOR SUCH DISPOSAL.

14. ALL FIELD TILE ENCOUNTERED DURING CONSTRUCTION OPERATIONS SHALL BE CONNECTED TO THE PROPOSED STORM SEWER SYSTEM OR SHALL BE RESTORED TO PROPER OPERATING CONDITION. A RECORD OF THE LOCATION OF ALL FIELD TILE OR DRAIN PIPE ENCOUNTERED SHALL BE KEPT BY THE CONTRACTOR AND TURNED OVER TO THE ENGINEER. DEVELOPER OR MUNICIPAL ENGINEER UPON COMPLETION OF THE PROJECT. THE COST OF THIS WORK SHALL BE CONSIDERED AS INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

15. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR SAFETY ON THE JOB.

16. THE CONTRACTOR SHALL COLLECT AND REMOVE ALL CONSTRUCTION DEBRIS, EXCESS MATERIALS, TRASH, OIL AND GREASE RESIDUE, MACHINERY, TOOLS AND OTHER MISCELLANEOUS ITEMS WHICH WERE NOT PRESENT PRIOR TO PROJECT COMMENCEMENT AT NO ADDITIONAL EXPENSE TO THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ANY AND ALL PERMITS NECESSARY FOR THE HAULING AND DISPOSAL REQUIRED FOR CLEAN-UP AS DIRECTED BY THE ENGINEER OR OWNER. BURNING ON THE SITE IS NOT PERMITTED.

17. ALL EXISTING UTILITIES OR IMPROVEMENTS, INCLUDING WALKS, CURBS, PAVEMENT AND PARKWAYS DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE PROMPTLY RESTORED TO THEIR RESPECTIVE ORIGINAL CONDITION. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT UNLESS SPECIFICALLY NOTED ON THE PLANS.

18. TREES NOT MARKED FOR REMOVAL SHALL BE CONSIDERED AS DESIGNATED TO BE SAVED AND SHALL BE PROTECTED UNDER THE PROVISIONS OF (SSRBC) ARTICLE 201.05.

19. LIMB PRUNING SHALL BE PERFORMED UNDER THE SUPERVISION OF THE LANDSCAPE ARCHITECT MEETING THE OWNER'S APPROVAL AND SHALL BE UNDERTAKEN IN A TIMELY FASHION SO AS NOT TO INTERFERE WITH CONSTRUCTION.

20. ALL LIMBS, BRANCHES, AND OTHER DEBRIS RESULTING FROM THIS WORK SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR AT HIS OWN EXPENSE OFF-SITE.

21. ALL CUTS OVER 1" IN DIAMETER SHALL BE MADE FLUSH WITH THE NEXT LARGE BRANCH. WOUNDS OVER 1" IN DIAMETER SHALL BE PAINTED WITH AN APPROVED TREE PAINT.

22. GENERAL EXCAVATION/UNDERGROUND NOTES

A. SLOPE SIDES OF EXCAVATIONS TO COMPLY WITH CODES AND ORDINANCES HAVING JURISDICTION. SHORE AND BRACE WHERE SLOPING IS NOT POSSIBLE EITHER BECAUSE OF SPACE RESTRICTIONS OR STABILITY OF MATERIAL EXCAVATED. MAINTAIN SIDES AND SLOPES OF EXCAVATIONS IN A SAFE CONDITION UNTIL COMPLETION OF BACKFILLING.

B. PROVIDE MATERIALS FOR SHORING AND BRACING, SUCH AS SHEET PILING, UPRIGHTS, STRINGERS AND CROSS BRACES, IN GOOD SERVICEABLE CONDITION. PROVIDE MINIMUM REQUIREMENTS FOR TRENCH SHORING AND BRACING TO COMPLY WITH CODES AND AUTHORITIES HAVING JURISDICTION. MAINTAIN SHORING AND BRACING IN EXCAVATIONS REGARDLESS OF TIME PERIOD EXCAVATIONS WILL BE OPEN. CARRY DOWN SHORING AND BRACING AS EXCAVATION PROGRESSES IN ACCORDANCE WITH OSHA AND GOVERNING AUTHORITY.

C. PREVENT SURFACE WATER AND SUBSURFACE OR GROUNDWATER FROM FLOWING INTO EXCAVATIONS. REMOVE WATER TO PREVENT SOFTENING OF FOUNDATION BOTTOMS, UNDERCUTTING FOOTINGS, AND SOIL CHANGES DETRIMENTAL TO STABILITY OF SUBGRADES AND FOUNDATIONS. PROVIDE AND MAINTAIN PUMPS, SUMPS, SUCTION AND DISCHARGE LINES AND OTHER DEWATERING SYSTEM COMPONENTS NECESSARY TO CONVEY WATER AWAY FROM EXCAVATIONS. CONVEY WATER REMOVED FROM EXCAVATIONS AND RAINWATER TO COLLECTING OR RUN-OFF AREAS ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION. PROVIDE AND MAINTAIN TEMPORARY DRAINAGE DITCHES AND OTHER DIVERSIONS OUTSIDE EXCAVATION LIMITS FOR EACH STRUCTURE. DO NOT USE TRENCH EXCAVATIONS AS TEMPORARY DRAINAGE DITCHES.

D. IMMEDIATELY REPORT CONDITIONS THAT MAY CAUSE UNSOUND BEARING TO THE OWNER/DEVELOPER BEFORE CONTINUING WORK.

23. FINAL ACCEPTANCE

A. ALL WORK PERFORMED UNDER THIS CONTRACT SHALL BE GUARANTEED BY THE CONTRACTOR AND HIS SURETY FOR A PERIOD OF TWELVE (12) MONTHS FROM THE DATE OF FINAL ACCEPTANCE OF THE PROJECT AND THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL DEFECTS IN MATERIALS AND WORKMANSHIP OF WHATEVER NATURE DURING THAT PERIOD. THIS GUARANTEE SHALL BE PROVIDED IN THE FORM OF MAINTENANCE BOND IN THE AMOUNT OF 10% OF THE COST OF IMPROVEMENTS.

B. BEFORE ACCEPTANCE BY THE OWNER AND FINAL PAYMENT, ALL WORK SHALL BE INSPECTED BY THE OWNER OR HIS REPRESENTATIVE. FINAL PAYMENT WILL BE MADE AFTER ALL THE CONTRACTOR'S WORK HAS BEEN APPROVED AND ACCEPTED.

C. NO UNDERGROUND WORK SHALL BE COVERED UNTIL IT HAS BEEN APPROVED BY THE MUNICIPALITY. APPROVAL TO PROCEED MUST BE OBTAINED FROM THE MUNICIPALITY PRIOR TO INSTALLING PAVEMENT BASE, BINDER, SURFACE, AND PRIOR TO PLACING ANY CONCRETE AFTER FORMS HAVE BEEN SET.

D. AT THE CLOSE OF EACH WORKING DAY AND AT THE CONCLUSION OF CONSTRUCTION OPERATIONS, ALL DRAINAGE STRUCTURES AND FLOW LINES SHALL BE FREE FROM DIRT AND DEBRIS.

24. UNDERGROUND NOTES

A. UNDERGROUND WORK SHALL INCLUDE TRENCHING, INSTALLATION OF PIPE, CASTINGS, STRUCTURES, BACKFILLING OF TRENCHES AND COMPACTION AND TESTING AS SHOWN ON THE CONSTRUCTION PLANS. FITTINGS AND ACCESSORIES NECESSARY TO COMPLETE THE WORK MAY NOT BE SPECIFIED, BUT SHALL BE CONSIDERED AS INCIDENTAL TO THE COST OF THE CONTRACT.

B. WHERE SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER, EXISTING DRAINAGE STRUCTURES AND SYSTEMS SHALL BE CLEANED OF DEBRIS AND PATCHED AS NECESSARY TO ASSURE INTEGRITY OF THE STRUCTURE. THIS WORK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR STRUCTURES AND CONTRACT UNIT PRICE PER LINEAL FOOT FOR SYSTEMS WHICH SHALL BE PAYMENT IN FULL FOR CLEANING, PATCHING, REMOVAL AND DISPOSAL OF DEBRIS AND DIRT. DRAINAGE STRUCTURES AND SYSTEMS CONSTRUCTED AS PART OF THIS PROJECT SHALL BE MAINTAINED BY THE CONTRACTOR AT HIS EXPENSE. NO PAYMENT WILL BE MADE FOR CLEANING STRUCTURES OR SYSTEMS CONSTRUCTED AS PART OF THIS PROJECT.

C. ANY DEWATERING OF SEWER AND WATER TRENCHES AS WELL AS TEMPORARY SHEETING OR BRACING THAT MAY BE REQUIRED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL NOT BE CONSIDERED EXTRA WORK UNLESS THERE IS A SPECIFIC LINE ITEM FOR DEWATERING. IN THE EVENT THAT SOFT MATERIALS WITH UNCONFINED COMPRESSIVE STRENGTH LESS THAN 0.5 TSF ARE ENCOUNTERED IN SEWER CONSTRUCTION, THE CONTRACTOR SHALL (UPON APPROVAL OF THE OWNER AND/OR ENGINEER) OVER-EXCAVATE TO A DEPTH OF ONE (1) FOOT BELOW THE BOTTOM OF THE PIPE AND BACKFILL WITH COMPACTED CRUSHED STONE, PROPERLY FORMED TO FIT THE BOTTOM OF THE PIPE.

D. TRENCH BACKFILL WILL BE REQUIRED FOR THE FULL TRENCH DEPTH WITHIN TWO (2) FEET OF PROPOSED OR EXISTING PAVEMENTS, UTILITIES, DRIVEWAYS, AND SIDEWALKS AND EXTENDING A DISTANCE EQUAL TO A 1:1 SLOPE FROM SUBGRADE ELEVATION TO TOP OF PIPE. THE TRENCH BACKFILL SHALL CONSIST OF GRANULAR MATERIAL MEETING IDOT CA-6 GRADATION. THE TRENCH BACKFILL SHALL BE COMPACTED IN ACCORDANCE WITH (SSRBC) SPECIFICATIONS. JETTING WITH WATER SHALL NOT BE PERMITTED. THE COST OF SUCH CONSTRUCTION SHALL BE CONSIDERED INCIDENTAL TO THIS CONTRACT AND SHALL BE INCLUDED IN THE UNIT PRICE OF THE PIPE. NO SEPARATE PAYMENT SHALL BE MADE FOR THIS ITEM.

E. THE CONTRACTOR SHALL INSTALL A 4" X 4" X 8' (NOMINAL) POST AT THE TERMINUS OF THE SANITARY, WATER AND STORM SERVICE, SANITARY AND STORM MANHOLES, CATCH BASINS, INLETS AND WATER VAULTS. THE POST SHALL EXTEND 4' ABOVE THE GROUND. THE TOP 12" OF SAID POST SHALL BE PAINTED AS FOLLOWS: SANITARY - RED, WATERMAIN - BLUE, STORM - GREEN.

F. AFTER THE STORM SEWER SYSTEM HAS BEEN CONSTRUCTED, THE CONTRACTOR SHALL PLACE EROSION CONTROL AT REAR YARD INLET LOCATIONS, AND AT OTHER LOCATIONS SELECTED BY THE ENGINEER, TO MINIMIZE THE AMOUNT OF SILTATION WHICH NORMALLY WOULD ENTER THE STORM SEWER SYSTEM.

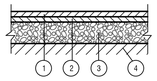
G. HYDRANTS SHALL NOT BE FLUSHED DIRECTLY ON THE ROAD SUBGRADES. WHENEVER POSSIBLE, HOSES SHALL BE USED TO DIRECT THE WATER INTO LOT AREAS OR THE STORM SEWER SYSTEM (IF AVAILABLE). DAMAGE TO THE ROAD SUBGRADE OR LOT GRADING DUE TO EXCESSIVE WATER SATURATION AND/OR EROSION FROM HYDRANT FLUSHING, OR FROM LEAKS IN THE WATER DISTRIBUTION SYSTEM, WILL BE REPAIRED BY THE CONTRACTOR AT HIS COST.

H. ALL TOP OF FRAMES FOR STORM AND SANITARY SEWERS AND VALVE VAULT COVERS ARE TO BE ADJUSTED TO MEET FINAL FINISH GRADE. THIS ADJUSTMENT IS TO BE MADE BY THE SEWER AND WATER CONTRACTOR AND THE COST IS TO BE CONSIDERED INCIDENTAL. THESE ADJUSTMENTS TO FINISHED GRADE WILL NOT ALLEVIATE THE CONTRACTOR FROM ANY ADDITIONAL ADJUSTMENTS AS REQUIRED BY THE MUNICIPALITY UPON FINAL INSPECTION OF THE PROJECT. (FINAL GRADES TO BE DETERMINED BY THE MUNICIPALITY AT THE TIME OF FINAL INSPECTION AND MAY VARY FROM PLAN GRADE.)

I. SLEEVES FOR UTILITY ((COMED, TELEPHONE, ETC.) STREET CROSSING, SHALL BE INSTALLED WHERE DIRECTED BY THE OWNER. SLEEVES SHALL BE 6" PVC INSTALLED 36" BELOW THE TOP OF CURB AND EXTEND TWO FEET OUTSIDE THE CURB. TRENCH SHALL BE BACKFILLED WITH COMPACTED GRANULAR MATERIAL.

J. THE CONTRACTOR SHALL VERIFY THE SIZE AND INVERT ELEVATION OF ALL CONNECTIONS TO AVOID ANY CONFLICTS BEFORE STARTING WORK. NOTIFY OWNER OF ANY DISCREPANCIES.

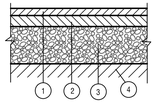
25. IT SHALL BE UNDERSTOOD THAT NEITHER THE MUNICIPALITY, ITS OFFICIALS, CONSULTANTS, NOR ITS EMPLOYEES ARE AGENTS OF OR REPRESENTATIVES OF THE OWNER. NONE-THE-LESS, THE MUNICIPALITY, ITS OFFICIALS AND EMPLOYEES ARE TO BE PROVIDED SAFE ACCESS TO ALL PHASES OF ALL WORK PERFORMED ON THE PROJECT SITE TO MONITOR THE QUALITY OF THE WORK AND ASSURE ITS CONFORMITY WITH THE PLANS AND SPECIFICATIONS. THERE SHALL BE NO PERSONAL LIABILITY UPON ANY OFFICIAL OR EMPLOYEE OF THE MUNICIPALITY ON ACCOUNT OF ACTIONS TAKEN OR NOT TAKEN IN THE COURSE OF THEIR WORK. THE CONTRACTOR MUST AT ALL TIMES MAINTAIN A SAFE ACCESS TO THE WORK FOR INSPECTORS, "SAFE", MEANING CONDITIONS COMPLYING WITH ALL PROVISIONS OF ALL APPLICABLE AND RECOGNIZED SAFETY STANDARDS, FEDERAL, STATE AND LOCAL. IF ACCESS IS NOT SAFE AND INSPECTIONS CANNOT BE MADE UNDER SAFE CONDITIONS, THE INSPECTOR CAN ORDER CESSATION OF THE WORK SO AFFECTED UNTIL SUCH TIME AS CONTRACTOR PROVIDES SAFE ACCESS.



TYPICAL ASPHALT PAVEMENT SECTION
(STANDARD DUTY - PASSENGER VEHICLE PARKING AREAS)
N.T.S.

1. 1.5" HMA SURFACE COURSE, MIX "C", N50
2. 2.25" HMA BINDER COURSE, IL 19.0, N50
3. 10" AGGREGATE BASE COURSE, TYPE B
4. COMPACTED AND STABLE SUBGRADE

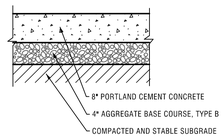
STRUCTURAL #:
1.5 X 0.40 = 0.60
2.25X 0.33 = 0.74
10.0 X 0.13 = 1.30
= 2.64



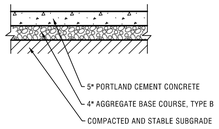
TYPICAL ASPHALT PAVEMENT SECTION
(HEAVY DUTY - TRUCK AREAS)
N.T.S.

1. 2.0" HMA SURFACE COURSE, MIX "C", N50
2. 4" HMA BINDER COURSE, IL 19.0, N50
3. 12" AGGREGATE BASE COURSE, TYPE B
4. COMPACTED AND STABLE SUBGRADE

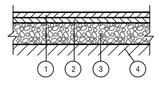
STRUCTURAL #:
2.0 X 0.40 = 0.80
4.0 X 0.33 = 1.32
12 X 0.13 = 1.56
= 3.68




TYPICAL CONCRETE PAVEMENT SECTION
LOADING DOCK
N.T.S.



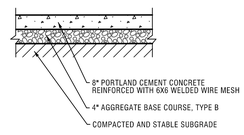

TYPICAL SIDEWALK/PEDESTRIAN PATH SECTION
N.T.S.



TYPICAL ASPHALT PAVEMENT SECTION
WITHIN IDOT RIGHT-OF-WAY
N.T.S.

1. 2.0" HMA SURFACE COURSE, MIX "D", N50 MINIMUM
2. 8.0" HMA BINDER COURSE, IL 19.0, N50
3. 4.0" AGGREGATE BASE COURSE, TYPE B
4. COMPACTED AND STABLE SUBGRADE

STRUCTURAL #:
2.0 X 0.40 = 0.80
8.0 X 0.33 = 2.64
4.0 X 0.13 = 0.52
= 3.96




ALTERNATE PORTLAND CEMENT CONCRETE SECTION
WITHIN IDOT RIGHT-OF-WAY
N.T.S.

## LEGEND

| EXISTING | DESCRIPTION | PROPOSED |
|---|---|---|
| | DRAIN TILE | |
| | STORM SEWER | |
| | SANITARY SEWER | |
| | SANITARY TRUNK SEWER | |
| W 8" W | WATER MAIN (WITH SIZE) | 8" |
| | PIPE TRENCH BACKFILL | |
| G G | GAS MAIN | G |
| T T | TELEPHONE LINES | T |
| E E | ELECTRIC LINE | E |
| X | FENCE | X |
| | RIGHT-OF-WAY | |
| | EASEMENT | |
| | PROPERTY LINE | |
| | SETBACK LINE | |
| | CENTERLINE | |
| 680 | CONTOUR | 680 |
| | SANITARY MANHOLE | |
| | STORM MANHOLE | |
| | CATCH BASIN | |
| | INLET | |
| | FIRE HYDRANT | |
| | PRESSURE CONNECTION | |
| | PIPE REDUCER | |
| | VALVE AND VAULT, VALVE | |
| | FLARED END SECTION | |
| | STREET LIGHT | |
| | UTILITY POLE | |
| | CONTROL POINT | |
| | SIGN | |
| XXX.XX | SPOT ELEVATION | XXX.XX |
| | SOIL BORING | |
| | OVERLAND FLOW ROUTE | |
| | DRAINAGE SLOPE | OR |
| | GUARDRAIL | |
| | WATER'S EDGE | |
| | CONCRETE | |
| | REVERSE PITCH CURB | |
| | TREE, FIR TREE, BUSH, & PROPOSED TREE TO REMOVE | |

### ABBREVIATIONS

| | | |
|---|---|---|
| M = STORM MANHOLE | I = INVERT OR INLET | T/P = TOP OF PIPE |
| S = SANITARY MANHOLE | TF = TOP OF FOUNDATION | B/P = BOTTOM OF PIPE |
| CB = CATCH BASIN | GF = GARAGE FLOOR | WM = WATERMAIN |
| LP = LIGHT POLE | TC = TOP OF CURB | SAN = SANITARY SEWER |
| VV = VALVE VAULT | TD = TOP OF DEPRESSED CURB | STM = STORM SEWER |
| E = END SECTION | TW = TOP OF RETAINING WALL | LO = LOOK OUT |
| FH = FIRE HYDRANT | BW = BOTTOM OF RETAINING WALL | PLO = PARTIAL LOOK OUT |
| GR = GRADE RING (HYDRANT) | OP = OUTLET OF PIPE | |

### PERMITS

| DESCRIPTION | LOG NO. | PERMIT NO. | DATE ISSUED |
|---|---|---|---|
| IDNR ECOCAT | 2410011 | 2410011 | 02/05/2024 |
| IDNR SHPO | 007030422 | 007030422 | 05/20/2022 |
| IEPA NPDES | | | |
| USACE | LRC-2021-00901 | LRC-2021-00901 | 05/27/2022 |
| IDOT | | | |
| IEPA DWPC (SANITARY) | | | |
| IEPA DPWS (WATER) | | | |
| MWRD | | | |
| NCCSWCD | 22-1651 | 22-1651 | 04/29/2022 |

### BENCHMARK

SEE SHEET ET FOR BENCHMARK INFORMATION.

### CONTACT INFORMATION

**VILLAGE OF PALATINE**
200 EAST WOOD STREET
PALATINE, IL 60067
(847) 358-7500

**AT&T**
688 INDUSTRIAL DRIVE
ELMHURST, IL 60126
(630) 600-6347

**COMMONWEALTH EDISON**
201 W. ARTHUR AVE.
MT. PROSPECT, IL 60056
(847) 870-2124

**NICOR GAS**
1011 WILEY ROAD
SCHAUMBURG, IL 60195
(847) 843-0627

| NO. | DATE | REMARKS |
|---|---|---|
| 1 | 02/21/24 | REVISIONS PER ARCHITECT AND STORMTRAP |

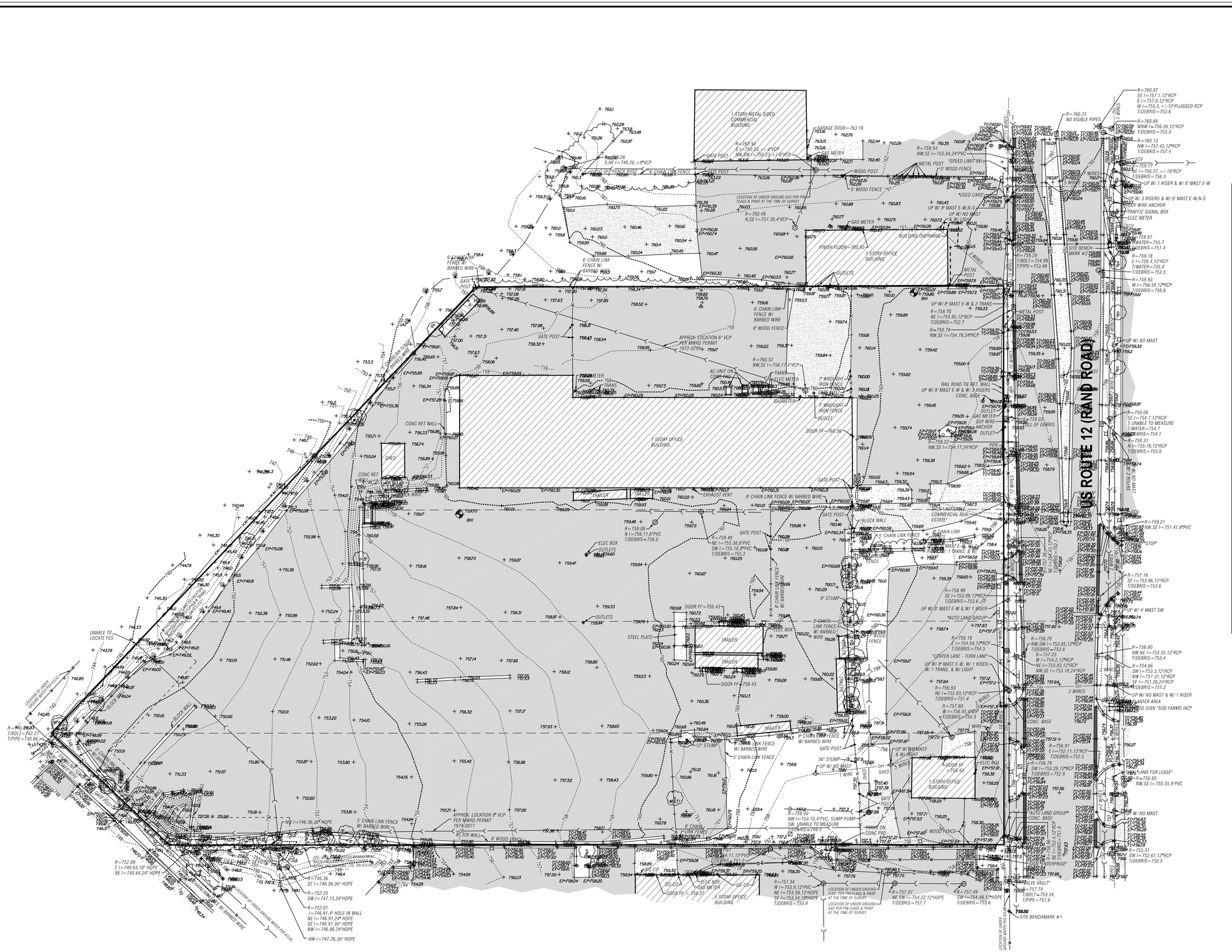
TYPICAL SECTIONS & GENERAL NOTES
OREST EXPRESS
NEW TRUCK TERMI
PALATINE, ILLINOIS

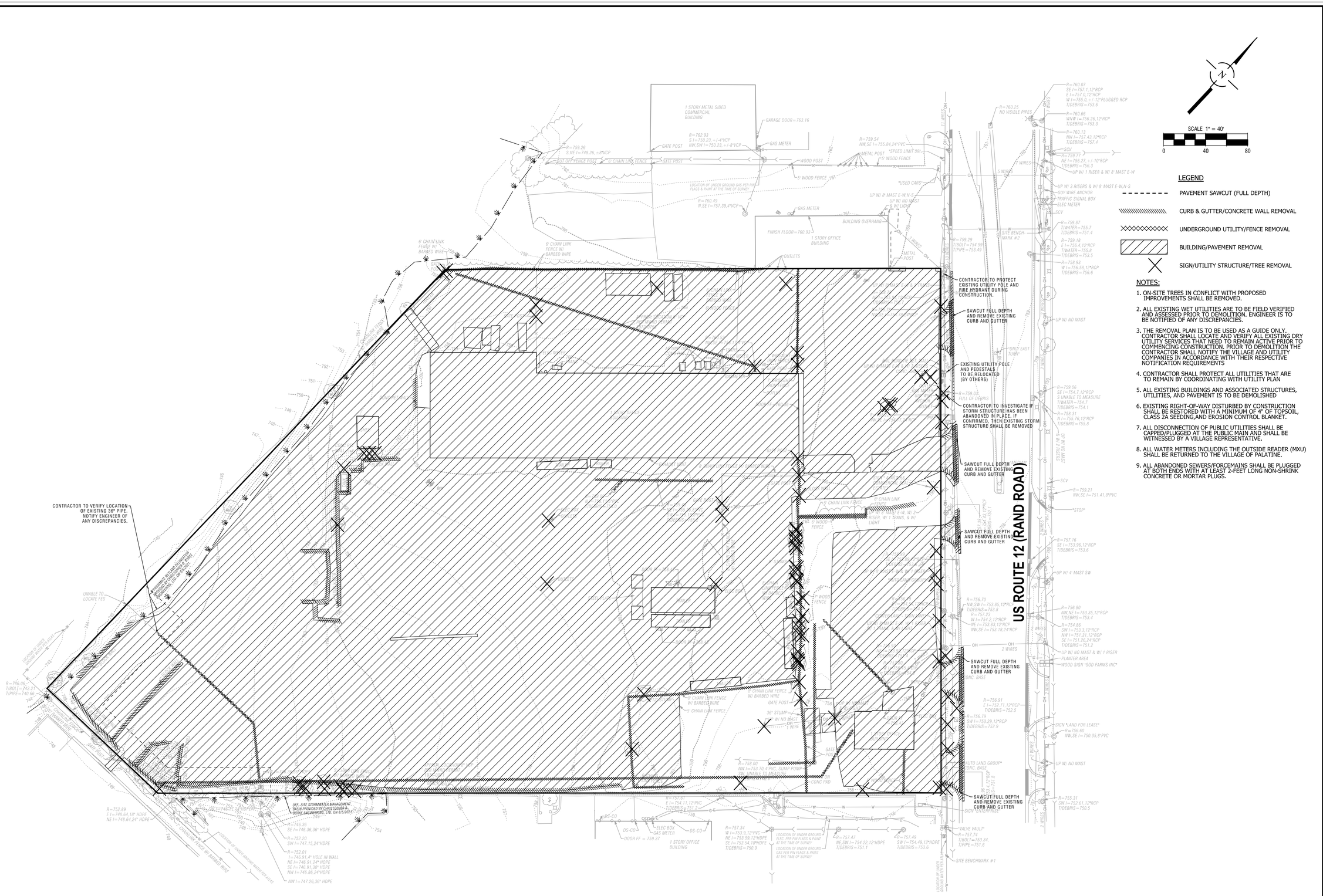
CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065
SPACECO INC.

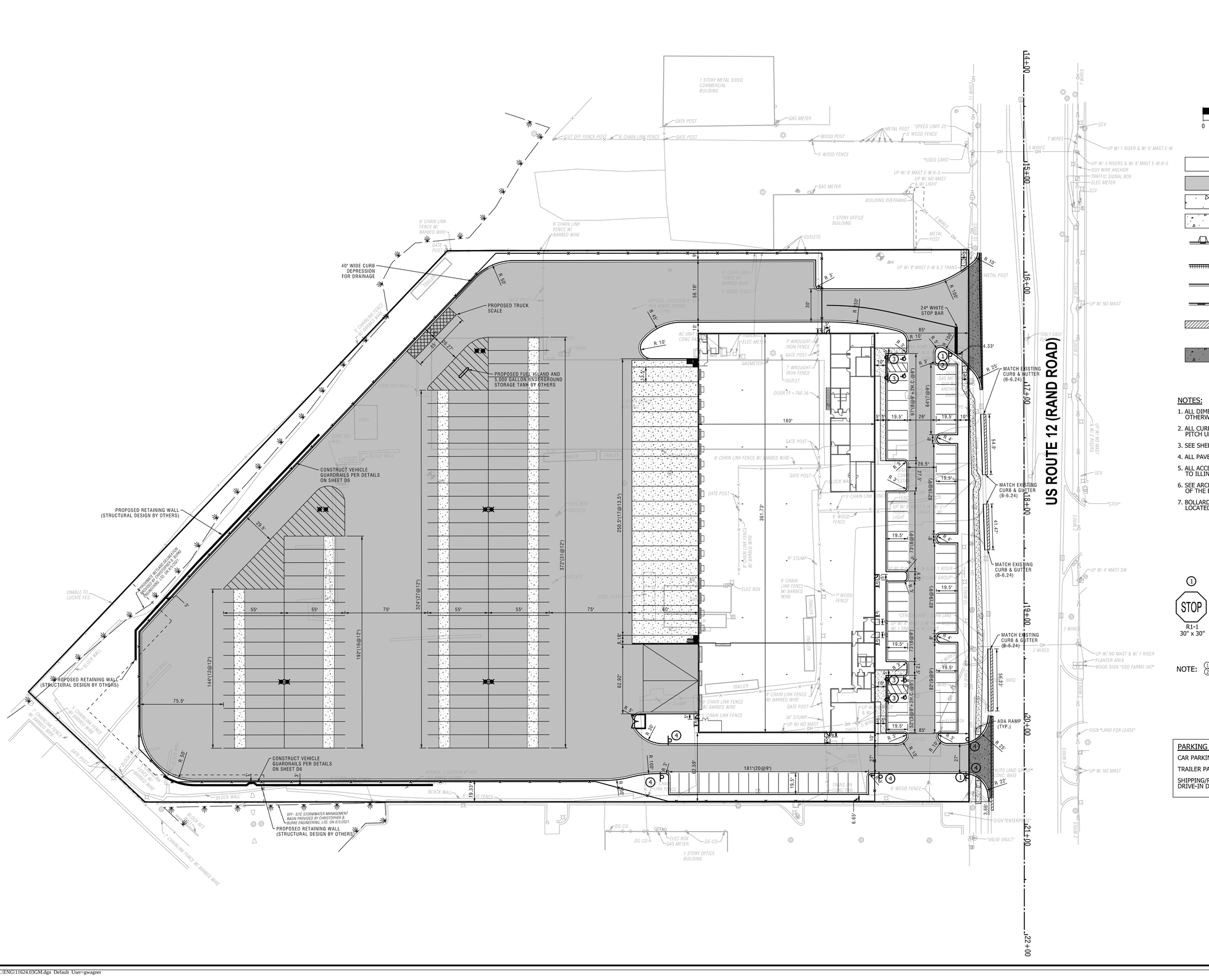
FILENAME: 11624.03GN
DATE: 02/16/24
JOB NO. 11624.03
SHEET GN
2 OF 24

Attachment: Final Engineering Plans (2240 - 2266 N. Rand Road - FPD Distribution Use)

N:\Projects\11624\11624.03-JLL\ENG\11624.03GN.dgn Default User=gwagner


1 STORY METAL SIDED COMMERCIAL BUILDING
GARAGE DOOR = 763.16
GAS METER
GATE POST
WOOD POST
6' CHAIN LINK FENCE
5' WOOD FENCE
LOCATION OF UNDER GROUND GAS PER PIN FLAGS & PAINT AT THE TIME OF SURVEY
FINISH FLOOR = 760.93
1 STORY OFFICE BUILDING
OUTLETS
6' CHAIN LINK FENCE W/ BARBED WIRE
6' WOOD FENCE
APPROX. LOCATION 6" VCP PER MWRD PERMIT 1972-0794
AC UNIT ON CONC PAD
TRANS
ELEC METER
BASEMENT
7' WROUGHT IRON FENCE
DOOR FF = 760.36
1 STORY OFFICE BUILDING
CONC RET WALL
SHED
8' CHAIN LINK FENCE W/ BARBED WIRE
EXHAUST VENT
GATE POST
ELEC BOX
OUTLETS
BLOCK WALL
6' WOOD FENCE
9" STUMP
8' CHAIN LINK FENCE W/ BARBED WIRE
STEEL PLATE
TRAILER
DOOR FF = 758.43
12" STUMP
36" STUMP
UP W/ NO MAST
UP W/ 8' MAST E-W & W/ 3 RISERS
CONC. BASE
1 STORY OFFICE BUILDING
APPROX. LOCATION 8" VCP PER MWRD PERMIT 1974-0071
6' CHAIN LINK FENCE W/ BARBED WIRE
BLOCK WALL
6' WOOD FENCE
TRANS ON CONC PAD
WOOD FENCE
CRC CO
ELEC BOX
GAS METER
DOOR FF = 759.31
A STORY OFFICE BUILDING
LOCATION OF UNDER GROUND ELEC PER PIN FLAGS & PAINT AT THE TIME OF SURVEY
LOCATION OF UNDER GROUND GAS PER PIN FLAGS & PAINT AT THE TIME OF SURVEY
UP W/ 8' MAST E-W & W/ 1 TRANS
UP W/ NO MAST
UP W/ 8' MAST E-W & W/ 2 TRANS
RAIL ROAD TIE RET. WALL
UP W/ 8' MAST E-W & W/ 3 RISERS
CONC. BASE
GUY WIRE ANCHOR
"SPEED LIMIT 35"
"USED CARS"
"AUTO LAND GROUP"
CONC. BASE
"AUTO LAND GROUP"
"LAND FOR LEASE"
"ALIVE VAULT"
"ENTERPRISE"
"RICH - AVAILABLE COMMERCIAL REAL ESTATE"
"AUTO LAND GROUP"
UP W/ 8' MAST E-W & W/ 1 RISER
UP W/ 1 RISER & W/ 8' MAST E-W
UP W/ 3 RISERS & W/ 8' MAST E-W,N-S
GUY WIRE ANCHOR
TRAFFIC SIGNAL BOX
ELEC METER
SITE BENCH MARK #2
UP W/ NO MAST & W/ 1 RISER
CENTER AREA
"SOD SIGN "SOD FARMS INC"
"STOP"
US ROUTE 12 (RAND ROAD)
SITE BENCHMARK #1
R=760.07 SE I=757.1,12"RCP E I=757.0,12"RCP W I=755.0, +/-12"PLUGGED RCP T/DEBRIS=753.6
R=760.66 W/W I=756.26,12"RCP T/DEBRIS=753.3
R=760.13 NW I=757.43,12"RCP T/DEBRIS=757.4
R=760.25 NO VISIBLE PIPES
R=759.71 NE I=756.27, +/-10"RCP T/DEBRIS=756.3
R=759.87 T/WATER=755.7 T/DEBRIS=751.4
R=759.18 E I=756.4,12"RCP T/WATER=755.8 T/DEBRIS=753.5
R=758.93 W I=756.58,12"RCP T/DEBRIS=756.6
R=758.70 NE I=755.95,12"RCP T/DEBRIS=752.7
R=758.73 NW,SE I=754.78,24"RCP
R=759.54 NW,SE I=755.84,24"PVC
R=760.40 N,SE I=757.39,4"VCP
R=760.52 NW,SE I=756.17,4"VCP
R=758.22 NW,SE I=754.17,24"RCP
R=759.06 N I=756.11,6"PVC T/DEBRIS=756.0
R=759.48 NE I=755.38,8"PVC SW I=755.18,8"PVC T/DEBRIS=755.2
R=757.34 W I=753.9,12"HDPE NE I=753.59,12"HDPE SE I=753.54,12"HDPE T/DEBRIS=750.9
R=757.47 NE,SW I=754.22,12"HDPE T/DEBRIS=751.1
R=757.49 SW I=754.49,12"HDPE T/DEBRIS=753.6
R=759.06 NW I=753.70,4"PVC, SUMP PUMP SW, UNABLE TO MEASURE T/DEBRIS=749.1
R=760.00 NW I=753.70,4"PVC, SUMP PUMP SW, UNABLE TO MEASURE T/DEBRIS=749.1
R=759.21 NW,SE I=751.41,8"PVC
R=759.06 SE I=754.1,12"RCP S UNABLE TO MEASURE T/WATER=754.1 T/DEBRIS=754.1
R=758.31 N I=755.76,12"RCP T/DEBRIS=755.8
R=757.16 SE I=753.96,12"RCP T/DEBRIS=753.6
R=756.99 SE I=753.89,12"RCP T/DEBRIS=753.6
R=756.80 NW,NE I=753.35,12"RCP T/DEBRIS=753.4
R=754.86 SW I=753.3,12"RCP NW I=751.31,12"RCP SE I=751.26,24"RCP T/DEBRIS=751.2
R=756.91 E I=752.71,12"RCP T/DEBRIS=752.5
R=756.79 SW I=753.29,12"RCP T/DEBRIS=752.9
R=756.60 NW,SE I=750.35,8"PVC
R=755.31 SW I=751.61,12"RCP T/DEBRIS=750.5
R=752.89 E I=748.64,18" HDPE NE I=748.64,24" HDPE
R=746.36 SE I=746.36,36" HDPE
R=752.20 SW I=747.15,24"HDPE
R=752.01 I=746.91,4" HOLE IN WALL NE I=746.91,24" HDPE SE I=746.91,30" HDPE NW I=746.86,24"HDPE
NW I=747.26,36" HDPE
NW I=746.36,36" HDPE
UNABLE TO LOCATE FES
LOCATION OF UNDER GROUND WATER PER AT&T
LOCATION OF UNDER GROUND WATER PER AT&T
LOCATION OF UNDER GROUND WATER PER AT&T

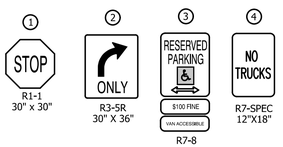

SCALE 1" = 40'
0
40
80
LEGEND
PAVEMENT SAWCUT (FULL DEPTH)
CURB & GUTTER/CONCRETE WALL REMOVAL
UNDERGROUND UTILITY/FENCE REMOVAL
BUILDING/PAVEMENT REMOVAL
SIGN/UTILITY STRUCTURE/TREE REMOVAL
US ROUTE 12 (RAND ROAD)
CONTRACTOR TO PROTECT EXISTING UTILITY POLE AND FIRE HYDRANT DURING CONSTRUCTION.
SAWCUT FULL DEPTH AND REMOVE EXISTING CURB AND GUTTER
EXISTING UTILITY POLE AND PEDESTALS - TO BE RELOCATED (BY OTHERS)
CONTRACTOR TO INVESTIGATE IF STORM STRUCTURE HAS BEEN ABANDONED IN PLACE. IF CONFIRMED, THEN EXISTING STORM STRUCTURE SHALL BE REMOVED
SAWCUT FULL DEPTH AND REMOVE EXISTING CURB AND GUTTER
SAWCUT FULL DEPTH AND REMOVE EXISTING CURB AND GUTTER
SAWCUT FULL DEPTH AND REMOVE EXISTING CURB AND GUTTER
SAWCUT FULL DEPTH AND REMOVE EXISTING CURB AND GUTTER
CONTRACTOR TO VERIFY LOCATION OF EXISTING 36" PIPE. NOTIFY ENGINEER OF ANY DISCREPANCIES.
OFF - SITE STORMWATER MANAGEMENT BASIN PROVIDED BY CHRISTOPHER B. BURKE ENGINEERING, LTD. ON 8/5/2021.
1 STORY METAL SIDED COMMERCIAL BUILDING
1 STORY OFFICE BUILDING
1 STORY OFFICE BUILDING
1 STORY OFFICE




NOTES:

1. ALL DIMENSIONS ARE TO THE BACK OF CURB UNLESS OTHERWISE NOTED.
2. ALL CURBS AND GUTTERS ARE REVERSED PITCH UNLESS OTHERWISE NOTED.
3. SEE SHEET GN1 FOR PAVEMENT SECTION DETAILS.
4. ALL PAVEMENT MARKINGS SHALL BE PAINT.
5. ALL ACCESSIBLE PARKING SPACE SIGNAGE SHALL CONFORM TO ILLINOIS ACCESSIBILITY CODE.
6. SEE ARCHITECTURAL DRAWINGS FOR DESIGN AND DETAILS OF THE BUILDINGS
7. BOLLARDS ARE TO BE PLACED AROUND FIRE HYDRANTS LOCATED IN TRUCK DOCKS

SIGN LEGEND:




NOTE: 1/2 INDICATES SIGN 1 MOUNTED ABOVE SIGN 2

PARKING SUMMARY:

| | |
|---|---|
| CAR PARKING STALLS (9' WIDE) | = 81 + (4 ADA) |
| TRAILER PARKING STALLS (12' WIDE) | = 86 |
| SHIPPING/RECEIVING TRUCK DOCKS<br>DRIVE-IN DOORS | = 18<br>= 3 |

| NO. | DATE | REMARKS |
|---|---|---|
| | | |

| NO. | DATE | REMARKS |
|---|---|---|
| 1 | 02/21/24 | REVISIONS PER ARCHITECT AND STORMTRAP |

GEOMETRIC PLAN

# OREST EXPRESS
# NEW TRUCK TERMINAL
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 698-4060 Fax: (847) 696-4005
SPACECO INC.

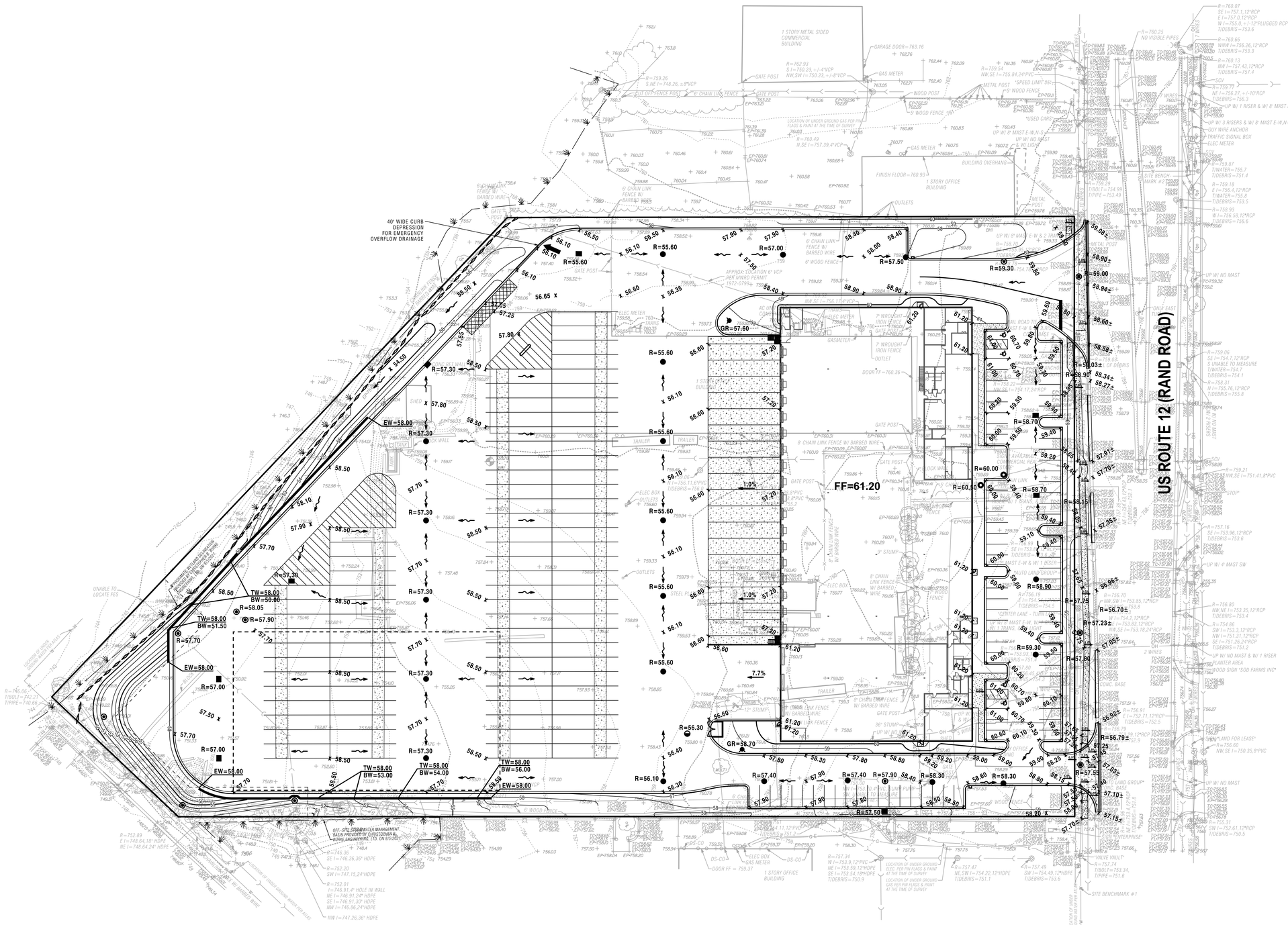
FILENAME: 11624.03GM

DATE: 02/16/24

JOB NO. 11624.03

SHEET GM 5 OF 24

Attachment: Final Engineering Plans (2240 - 2266 N. Rand Road - FPD Distribution Use)




SCALE 1" = 40'

0 40 80

## LEGEND

| | |
|---|---|
| FF | FINISHED FLOOR |
| | LOCAL DRAINAGE |
| | 100-YEAR OVERLAND FLOW ROUTE (100-YEAR FLOW IS WITHIN STORM SEWER) |
| XX.XX / XX.XX | TOP OF WALL / FINISHED GRADE @ BOTTOM OF WALL |
| x XX.XX± | PROPOSED SPOT GRADE (MATCH EXISTING) |
| | LIMITS OF GRADING DISTURBANCE |

## NOTES:

1. ADD 700 TO ELEVATIONS SHOWN AS XX.XX.
2. ALL CURB AND GUTTER IS REVERSE PITCH UNLESS NOTED OTHERWISE. SEE LEGEND ON GEOMETRIC SHEET.
3. ALL SPOT GRADES ALONG CURB LINE ARE EDGE OF PAVEMENT UNLESS NOTED OTHERWISE.

| NO. | DATE | REMARKS |
|---|---|---|
| 1 | 02/21/24 | REVISIONS PER ARCHITECT AND STORMTRAP |

GRADING PLAN

# OREST EXPRESS NEW TRUCK TERMINAL

PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

SPACECO INC.

FILENAME: 11624.03GR

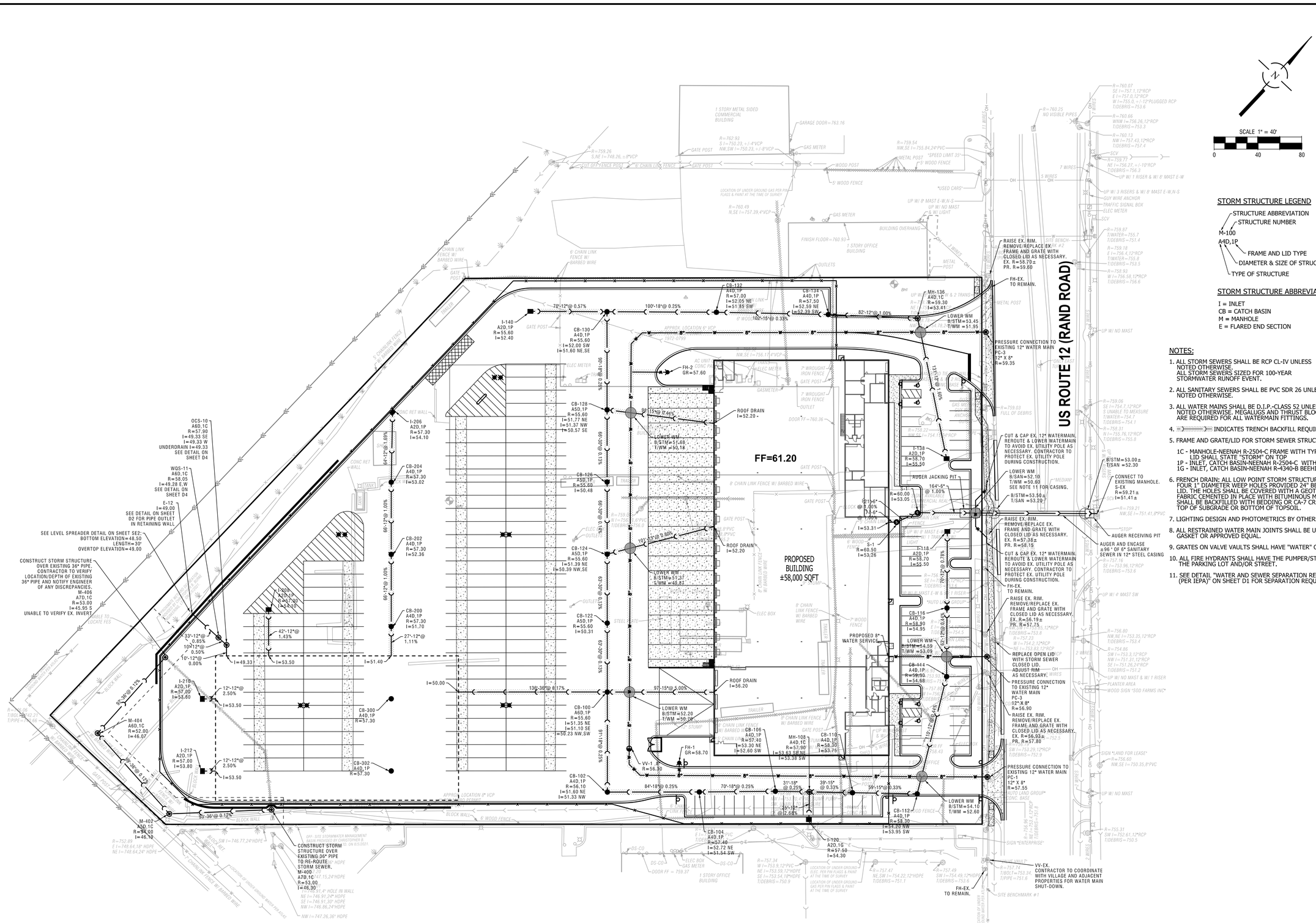
DATE: 02/16/24

JOB NO. 11624.03

SHEET GR

6 OF 24

Attachment: Final Engineering Plans (2240 - 2266 N. Rand Road - FPD Distribution Use)




| NO. | DATE | REMARKS |
|---|---|---|
| 1 | 02/21/24 | REVISIONS PER ARCHITECT AND STORMTRAP |

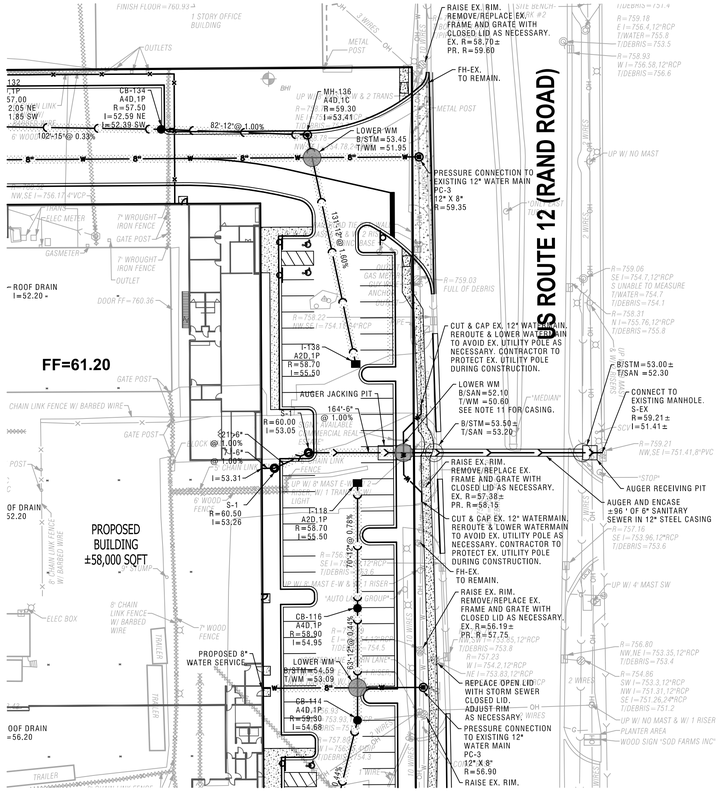
UTILITY PLAN

# OREST EXPRESS
# NEW TRUCK TERMINAL
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065
SPACECO INC.

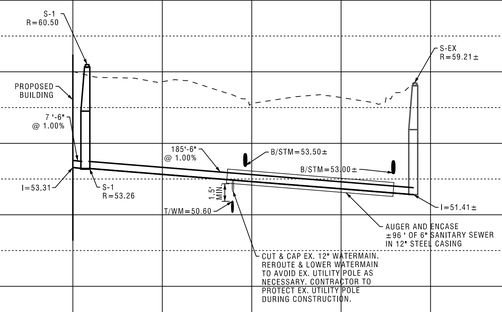
FILENAME: 11624.03UT
DATE: 02/16/24
JOB NO. 11624.03
SHEET UT
7 OF 24

Attachment: Final Engineering Plans (2240 - 2266 N. Rand Road - FPD Distribution Use)




NOTES:

SEE SHEET UT FOR UTILITY INFORMATION.




| NO. | DATE | REMARKS |
|---|---|---|
| 1 | 02/21/24 | REVISIONS PER ARCHITECT AND STORMTRAP |

PLAN AND PROFILE - SANITARY SEWER SERVICE

**OREST EXPRESS**
**NEW TRUCK TERMINAL**
PALATINE, ILLINOIS

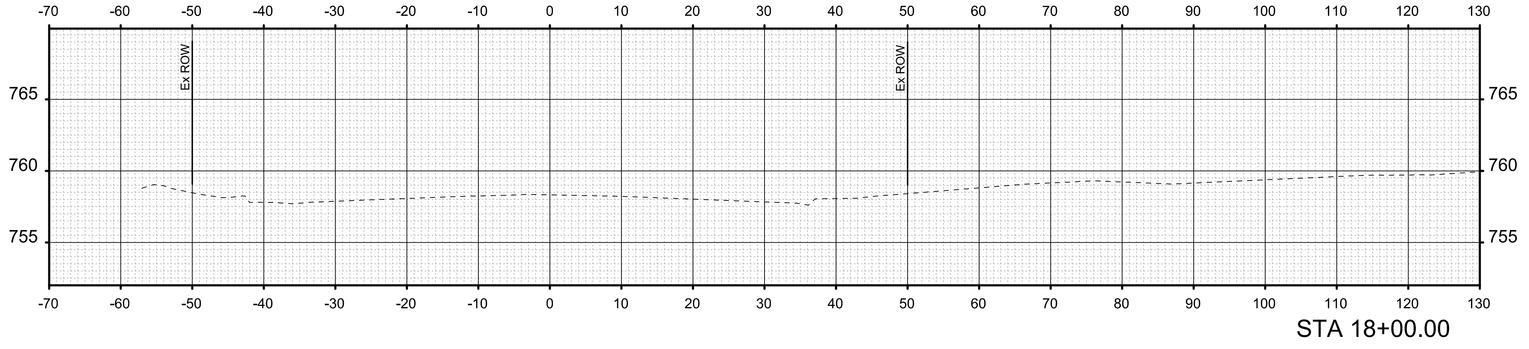
CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

SPACECO INC.

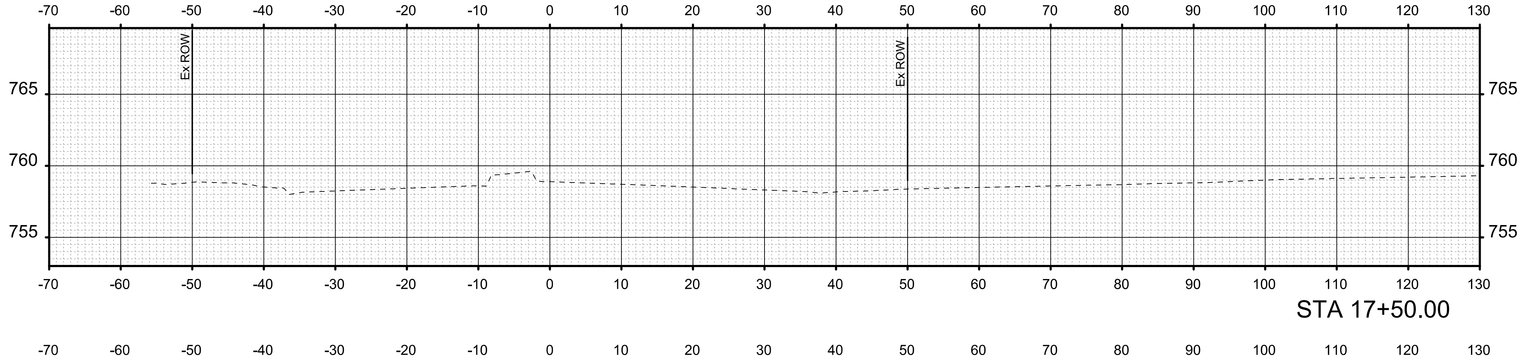
FILENAME: 11624.03PP01
DATE: 02/16/24
JOB NO. 11624.03
SHEET **PP01**
8 OF 24

Attachment: Final Engineering Plans (2240 - 2266 N. Rand Road - FPD Distribution Use)

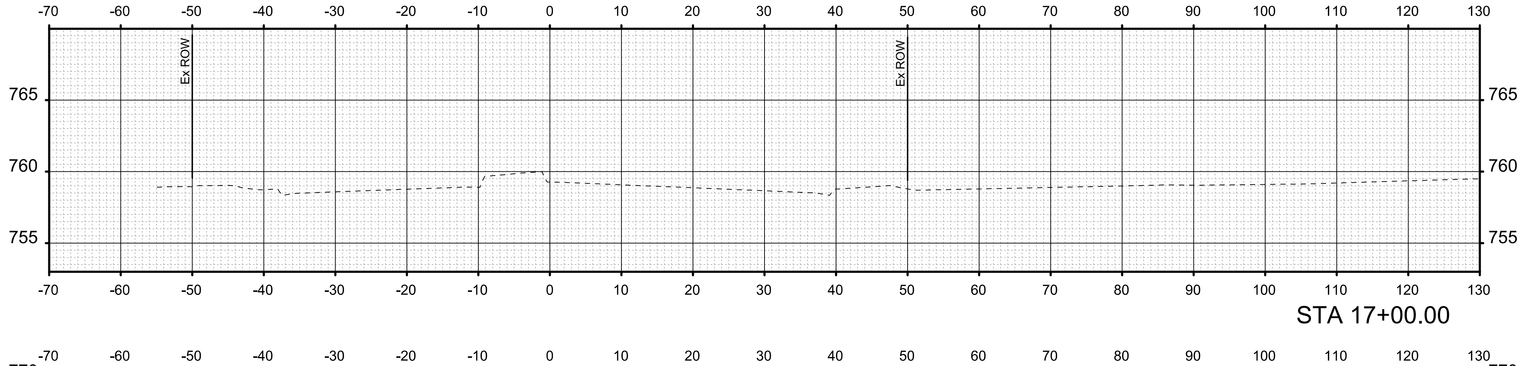
N:\Projects\11624\11624.03-JLL\ENG\11624.03PP01.dgn Default User=gwagner



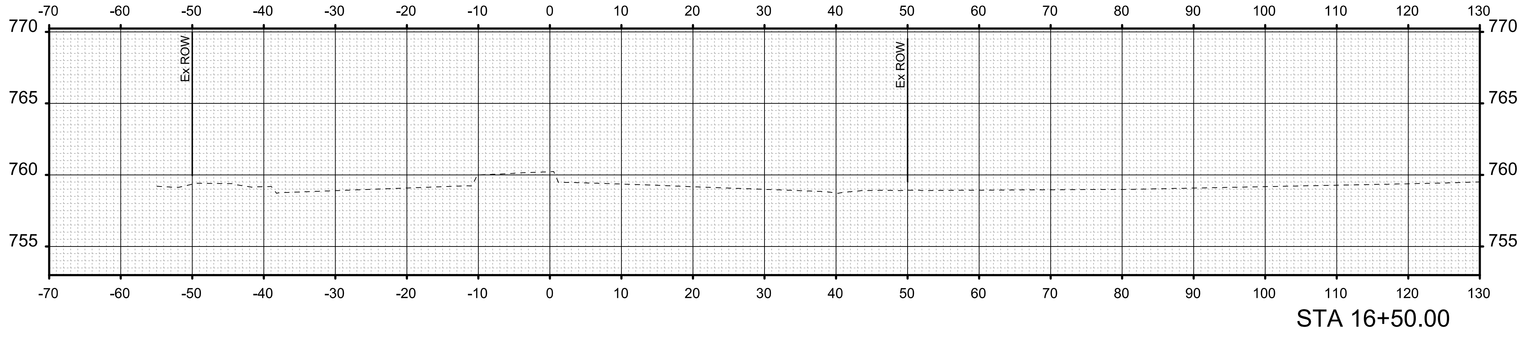

STA 18+00.00



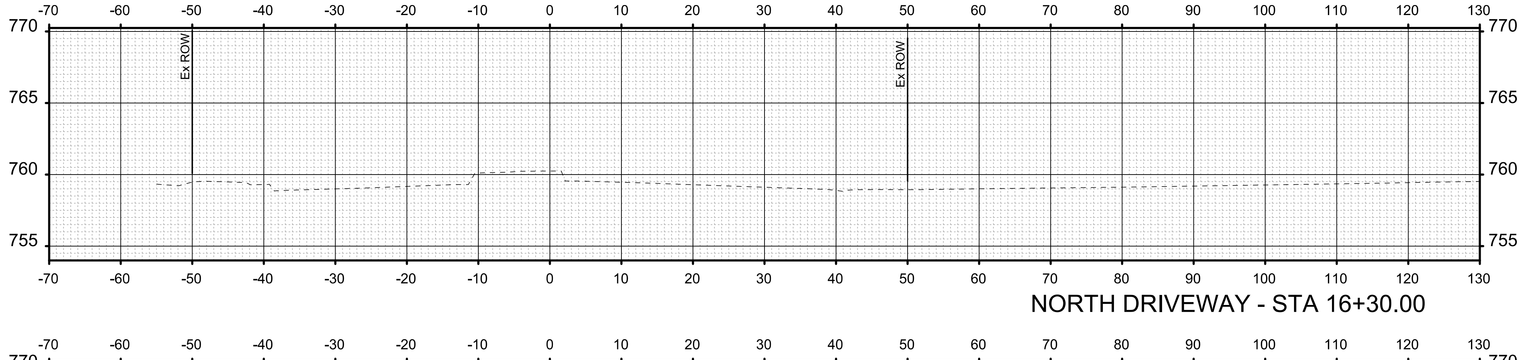

STA 17+50.00



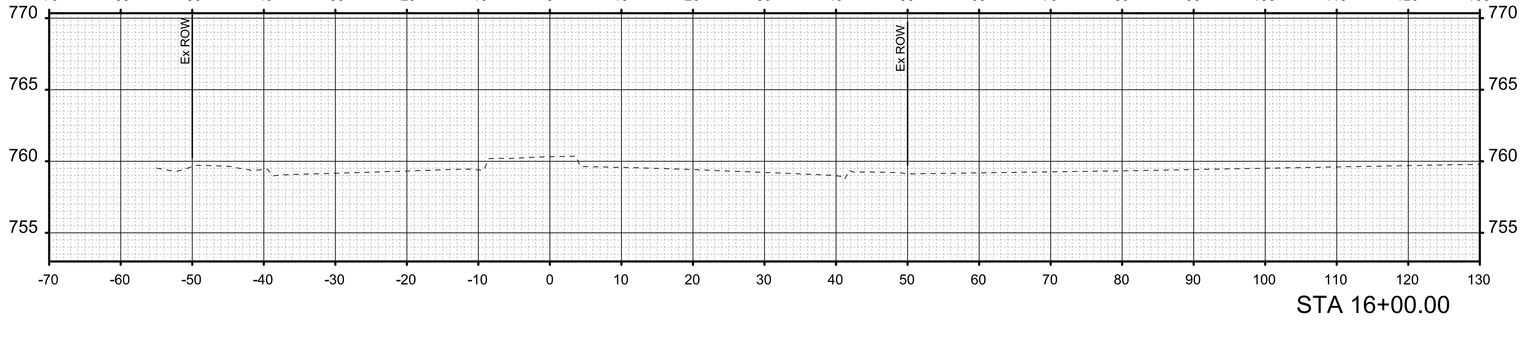

STA 17+00.00




STA 16+50.00




NORTH DRIVEWAY - STA 16+30.00




STA 16+00.00

SHEET
XS1
9 OF 24

JOB NO.
11624.03

DATE:
02/16/24

FILENAME:
11624.00XS01

SPACECO INC.

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

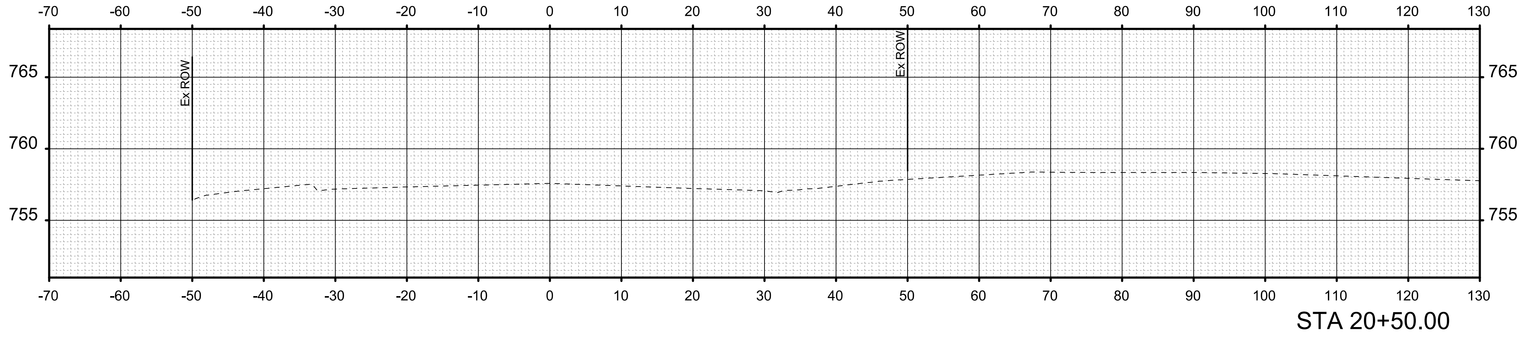
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

US RT 12 - CROSS SECTION - 1

**OREST EXPRESS**
**NEW TRUCK TERMINAL**
**PALATINE, ILLINOIS**

| NO. | DATE | REMARKS |
|---|---|---|
| 1 | 02/21/24 | REVISIONS PER ARCHITECT AND STORMTRAP |

| NO. | DATE | REMARKS |
|---|---|---|

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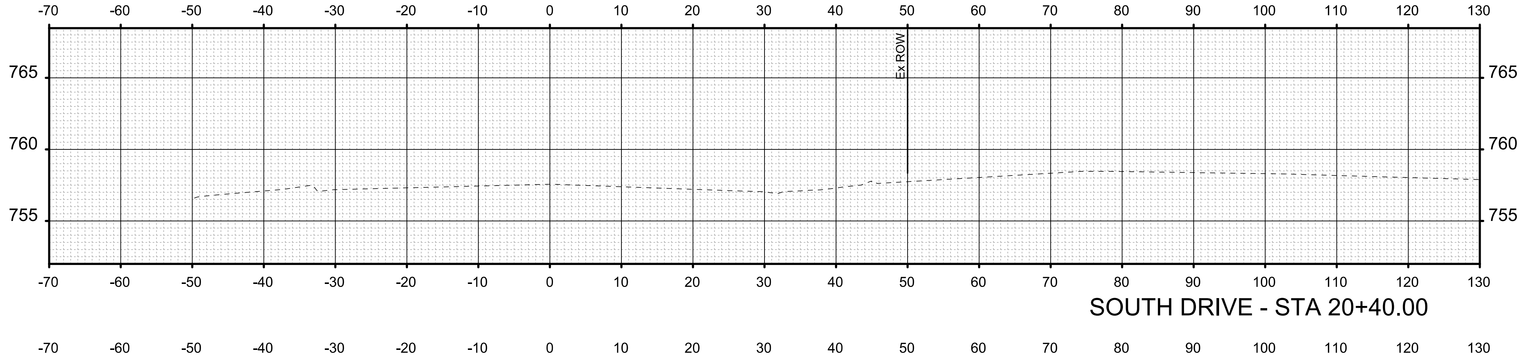
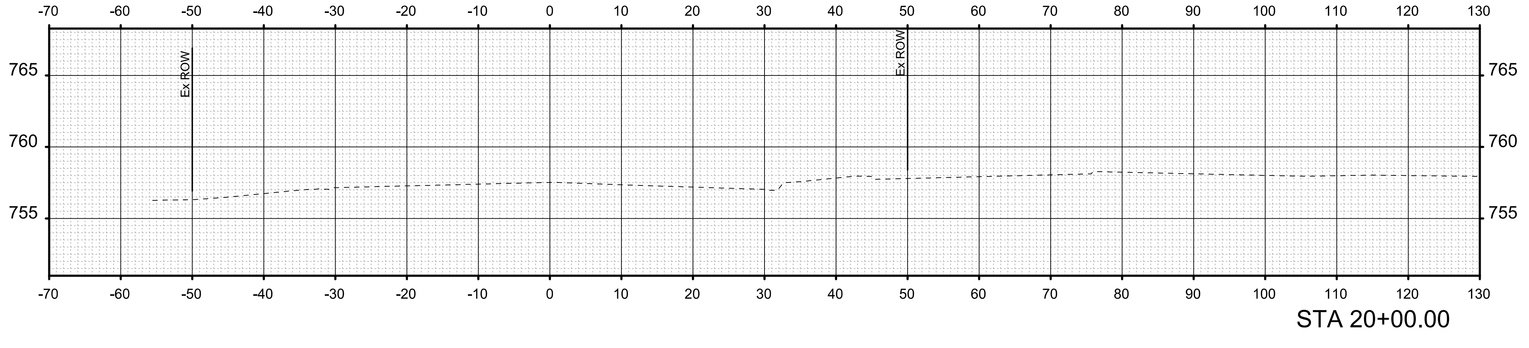



SOUTH DRIVE - STA 20+40.00

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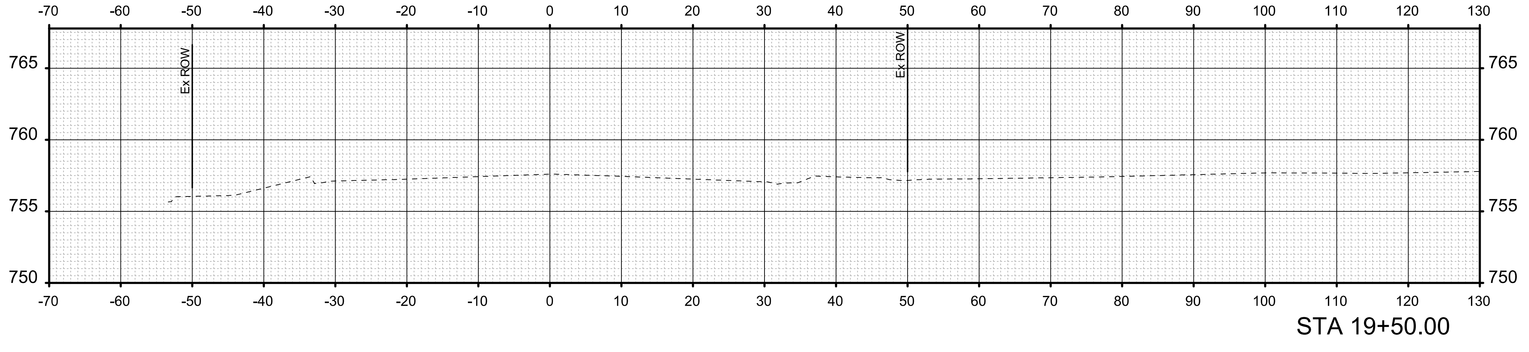


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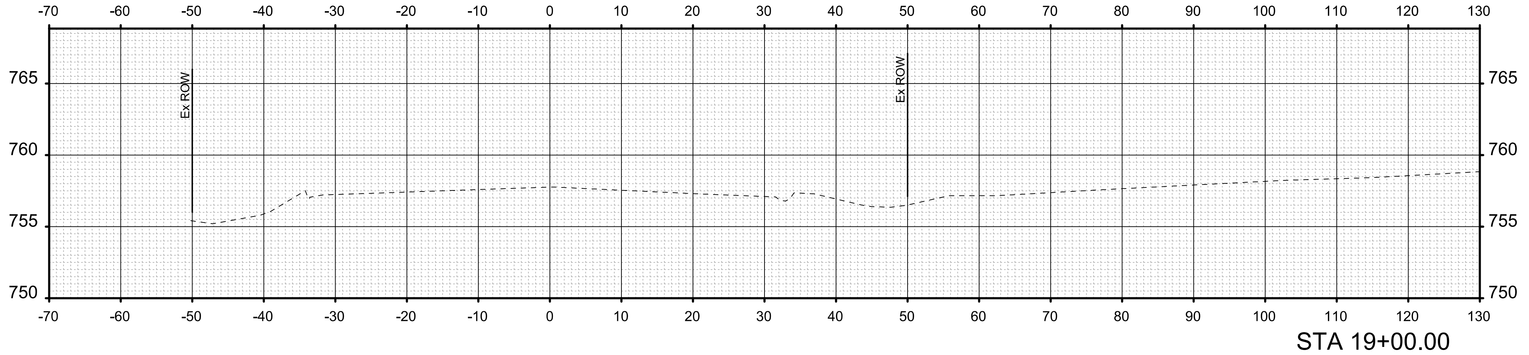


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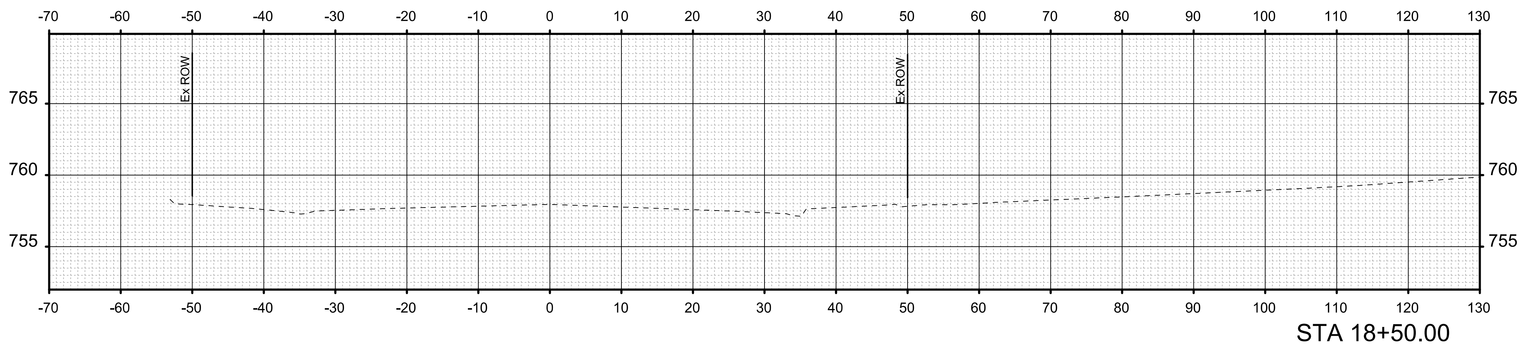


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SHEET
XS2
10 OF 24

JOB NO.
11624.03

DATE:
02/16/24

FILENAME:
11624.00XS02

SPACECO INC.

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

US RT 12 - CROSS SECTION - 2

OREST EXPRESS
NEW TRUCK TERMINAL
PALATINE, ILLINOIS

| NO. | DATE | REMARKS |
|---|---|---|
| 1 | 02/21/24 | REVISIONS PER ARCHITECT AND STORMTRAP |

| NO. | DATE | REMARKS |
|---|---|---|

This Soil Erosion & Sediment Control (SESC) Plan has been prepared to fulfill one of the requirements of the National Pollutant Discharge Elimination System (NPDES) General Permit No. ILR10____. The SESC Plan should be maintained on site as an integral component of the Storm Water Pollution Prevention Plan (SWPPP). The SWPPP, including the SESC Plan, should be amended whenever there is a change in design, construction, operation, or maintenance, which has a significant effect on the potential for the discharge of pollutants to the Waters of the State and which has not otherwise been addressed in the SWPPP. The SWPPP, shall also be amanded if it proves to be ineffective in eliminating or significantly minimizing pollutants, or in otherwise achieving the general objectives of controlling pollutants in storm water discharges associated with construction site activity. In addition, the SWPPP shall be amended to identify any new contractor and/or subcontractor that will implement a measure of the SWPPP.

1. SITE DESCRIPTION

A. The following is a description of the nature of the construction activity: Demolition of 2 existing buildings and the construction of an industrial building with associated grading, utilities, and paving improvements.

B. The following is a description of the intended sequence of construction activities which will disturb soils for major portions of the construction site:

Describe proposed construction sequence, sample follows:

1) Install perimeter sediment control measures
  a) Selective vegetation removal for silt fence installation
  b) Silt fence installation
  c) Construction fencing around areas not to be disturbed
  d) Stabilized construction entrance
2) Clear and grub (as necessary)
3) Construct sediment trapping devices (sediment traps, sediment basins, etc.)
4) Construct detention facilities and outlet control structure with restrictor & temporary perforated riser
5) Strip topsoil, stockpile topsoil and grade site
6) Temporarily stabilize topsoil stockpiles (seed and silt fence around toe of slope)
7) Install storm sewer, sanitary sewer, watermain and associated inlet & outlet protection
8) Permanently stabilize detention basins with seed and erosion control blanket
9)  Temporarily stabilize all areas including lots that have reached mass grade
10) Install roadways
11) Permanently stabilize all outlet areas
12) Install buildings and grade individual lots
13) Permanently stabilize lots
14) Remove all temporary soil erosion and sediment control measures after the site is stabilized with vegetation

C. The site has a total acreage of approximately 7.90 acres.  Construction activity will disturb approximately 7.75 acres of the site.

D. 1) An estimated runoff coefficient of the site after construction activities are completed is 0.82.
  2) Existing data describing the soil or quality of any discharge from the site is included in the Geotechnical Investigation Report prepared by Pioneer Engineering & Environmental Services, LLC Project No. 21-0282-152, dated February 15, 2022.

E. Refer to Sheets GR & UT for a site plan indicating;
  1) drainage patterns;
  2) approximate slopes anticipated before and after major grading activities;
  3) locations where vehicles enter or exit the site and controls to minimize off-site sediment tracking;
  4) areas of soil disturbance;
  5) the location of major structural and nonstructural controls;
  6) the location of areas where stabilization practices are expected to occur;
  7) surface waters (including wetlands); and,
  8) locations where storm water is discharged to a surface water.

F. 1) The name of the receiving water(s) is(are): Buffalo Creek Tributary .
  2) The name of the ultimate receiving water is: Des Plaines River.
  3) The extent of wetland acreage at the site is 0.15 acres.

G. Potential sources of pollution associated with this construction activity may include:

- sediment from disturbed soils
- portable sanitary stations
- fuel tanks
- staging areas
- waste containers
- chemical storage areas
- oil or other petroleum products
- adhesives
- tar
- solvents
- detergents
- fertilizers
- raw materials (e.g., bagged portland cement)
- construction debris
- landscape waste
- concrete and concrete trucks
- litter

2. CONTROLS

This section of the SESC Plan addresses the various controls that should be Implemented for each of the major construction activities described in the *Site Description* section. For each measure identified in the SWPPP, the contractor(s) or subcontractor(s) that will implement the measure should be identified.  All contractors and subcontractors that are identified should be required to sign a copy of the certification statement from Part IV.F, of the ILR10 Permit (in accordance with Part VI.G, - Signatory Requirements, of the ILR10 Permit), All signed certification statements should be maintained in the SWPPP.

A. Approved State or Local Plans

The management practices, controls and other provisions contained in the SWPPP should be at least as protective as the requirements contained in the Illinois Environmental Protection Agency's (IEPA) and the United States Department of Agriculture's Natural Resource Conservation Service Illinois Urban Manual, 2012.  Requirements specified in sediment and erosion control site plans or site permits or storm water management site plans or site permits approved by local officials that are applicable to protecting surface water resources are, upon submittal of a Notice of Intent (NOI) to be authorized to discharge under the ILR10 permit, incorporated by reference and are enforceable under the ILR10 permit even if they are not specifically included in a SWPPP required under the ILR10 permit.  This provision does not apply to provisions of master plans, comprehensive plans, non-enforceable guidelines or technical guidance documents that are not identified in a specific plan or permit that is issued for the construction site.

The soil erosion and sediment control measures for this site should meet the requirements of the following agencies:

- Village of Palatine
- MWRD
- IEPA
- U.S. Army Corps of Engineers

B. Control Implementation Schedule

Best Management Practices will be implemented on an as-needed basis to protect water quality.  Perimeter controls of the site should be installed prior to soil disturbance (excluding soil disturbance necessary to install the controls), including demolition activities.  Perimeter controls, including the silt fence, should be actively maintained until final stabilization of those portions of the site upward of the perimeter control.  Stabilized construction entrance(s) and sediment traps should be installed as described in the intended sequence of construction activities.  The contractor is responsible for the adequate protection (including sediment control) of existing sewers and sewer structures during construction operations.  As necessary, the appropriate sediment control measure should be installed prior to land disturbing activities.

Stabilization measures should be initiated where construction activities have temporarily or permanently ceased, in accordance with Local and State requirements, as described below.  Once construction activity in an area has permanently ceased, that area should be permanently stabilized.  Temporary perimeter controls should be removed after final stabilization of those portions of the site upward of the perimeter control.

C. Erosion and Sediment Controls

The appropriate soil erosion and sediment controls should be implemented on site and should be modified to reflect the current phase of construction.  All temporary sediment and erosion control measures should be repaired or replaced as soon as practicable to maintain NPDES compliance. Permittee or an authorized agent is responsible for inspecting all sediment and erosion control measures at a minimum of every 7 calendar days and within 24 hours, or one working day, of the end of a 0.5-inch (or greater) rain event.

Unless otherwise indicated, all vegetative and structural erosion and sediment control practices should be installed to the Standard Practice.  The contractor is responsible for the installation of any additional erosion and sediment control measures necessary to minimize erosion and sedimentation as determined by the Engineer or Primary Contact.

1) Stabilization Practices - Areas that will not be paved or covered with non-erosive material should be stabilized using procedures in substantial conformance with the Illinois Urban Manual.  This SESC Plan includes site-specific soil erosion and sediment control measures. Additional erosion controls should be implemented as necessary, as determined by the Engineer or Primary Contact.

The following temporary and permanent stabilization practices, at a minimum, are proposed:

- permanent seeding
- temporary seeding
- erosion control blanket
- other measures

Site-specific scheduling of the implementation of these practices is included in the Soil Protection Chart.
A record of the dates when major grading activities occur, when construction activities cease on a portion of the site, and when stabilization measures are initiated should be included in the SWPPP.

Stabilization of disturbed areas must be initiated within 1 working day of permanent or temporary cessation of earth activities and shall be completed as soon as possible but not later than 14 days from the initialization of stabilization work in an area. Exceptions to these time frames are specified below.

  a. Where the initiation of stabilization measures is precluded by snow cover, stabilization measures shall be initiated as soon as practicable.

  b. On areas where construction activity has temporarily ceased and will resume after 14 days, a temporary stabilization method can be used. Temporary stabilization techniques and materials shall conform to the SWPPP.

2)  Structural Practices - Provided below is a description of structural practices that should be implemented, to the degree attainable to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site.  Structural practices should be placed on upland soils to the degree practicable. The installation of the following devices may be subject to Section 404 of the Clean Water Act:

- stabilized construction entrance
- silt fence
- sediment traps (provide locations and dimensions in plan set)
- other measures

D. Storm Water Management

Provided below is a description of measures that will be installed during the construction process to control the pollutants in storm water discharges that will occur after the construction operations have been completed. The installation of these devices may be subject to Section 404 of the Clean Water Act.

1)  The practices selected for implementation were determined on the basis of technical guidance contained in IEPA's Illinois Urban Manual, Federal, State, and/or Local Requirements. The storm water management measures include:

- detention basins (wet basins, dry basins, etc.)
- retention basins
- vegetated swales
- infiltration trenches
- other measures

2) Velocity dissipation devices, such as rip-rap aprons at flared end sections or level spreaders, shall be placed at discharge locations and along the length of any outfall channel as necessary to provide a non-erosive velocity flow from the structure to a watercourse so that the natural, physical, and biological characteristics and functions are maintained and protected (e.g., maintenance of hydrologic conditions, such as the hydroperiod and hydrodynamics present prior to the initiation of construction activities).

E. Waste Management

Solid waste materials including trash, construction debris, excess construction materials, machinery, tools and other items will be collected and disposed of off site by the contractor.  The contractor is responsible to acquire the permit required for such disposal.  Burning on site will not be permitted.  No solid materials, including building materials, shall be discharged to Waters of the State, except as authorized by a Section 404 permit.  All waste materials should be collected and stored in approved receptacles.  No wastes should be placed in any location other than in the approved containers appropriate for the materials being discarded.  There should be no liquid wastes deposited into dumpsters or other containers which may leak.  Receptacles with deficiencies should be replaced as soon as possible and the appropriate clean-up procedure should take place, if necessary.  Construction waste material is not to be buried on site.  Waste disposal should comply with all Local, State, and Federal regulations.

On-site hazardous material storage should be minimized and stored in labeled, separate receptacles from non-hazardous waste.  All hazardous waste should be disposed of in the manner specified by Local or State regulation or by the manufacturer.

F. Concrete Waste Management

Concrete waste or washout should not be allowed in the street or allowed to reach a storm water drainage system or watercourse. When practicable, a sign should be posted at each location to identify the washout. To the extent practicable, concrete washout areas should be located a reasonable distance from a storm water drainage inlet or watercourse, and should be located at least 10 feet behind the curb. If the washout area is adjacent to a paved road. A stabilized entrance that meets Illinois Urban Manual standards should be installed at each washout area.

The containment facilities should be of sufficient volume to completely contain all liquid and concrete waste materials including enough capacity for anticipated levels of rainwater.  The dried concrete waste material should be picked up and disposed of properly when 66% capacity is reached.  Hardened concrete can be properly recycled and used again on site (as approved by the Engineer) or hauled off site to an appropriate landfill.

G. Concrete Cutting

Concrete waste management should be implemented to contain and dispose of saw-cutting slurries.  Concrete cutting should not take place during or immediately after a rainfall event.  Waste generated from

concrete cutting should be cleaned-up and disposed into the concrete washout facility as described above.

H. Vehicle Storage and Maintenance

When not in use, construction vehicles should be stored in a designated area(s) outside of the regulatory floodplain, away from any natural or created watercourse, pond, drainage-way or storm drain. Controls should be installed to minimize the potential of runoff from the storage area(s) from reaching storm drains or water courses. Vehicle maintenance (including both routine maintenance as well as on-site repairs) should be made within a designated area(s) to prevent the migration of mechanical fluids (oil, antifreeze, etc.) into watercourses, wetlands or storm drains.  Drip pans or absorbent pads should be used for all vehicle and equipment maintenance activities that involve grease, oil, solvents, or other vehicle fluids.  Construction vehicles should be inspected frequently to identify any leaks; leaks should be repaired immediately or the vehicle should be removed from site.  Dispose of all used oil, antifreeze, solvents and other vehicle-related chemicals in accordance with United States Environmental Protection Agency (USEPA) and IEPA regulations and per Material Safety Data Sheet (MSDS) and/or manufacturer Instructions.  Contractors should immediately report spills to the Primary Contact.

I. Material Storage and Good Housekeeping

Materials and/or contaminants should be stored in a manner that minimizes the potential to discharge into storm drains or watercourses.  An on-site area should be designated for material delivery and storage.  All materials kept on site should be stored in their original containers with legible labels, and if possible, under a roof or other enclosure.  Labels should be replaced if damaged or difficult to read.  Bermed-off storage areas are an acceptable control measure to prevent contamination of storm water.  MSDS should be available for referencing clean-up procedures. Any release of chemicals/contaminants should be immediately cleaned up and disposed of properly.  Contractors should immediately report all spills to the Primary Contact, who should notify the appropriate agencies, if needed.

To reduce the risks associated with hazardous materials on site, hazardous products should be kept in original containers unless they are not re-sealable. The original labels and MSDS should be retained on site at all times.  Hazardous materials and all other material on site should be stored in accordance with manufacturer or MSDS specifications.  When disposing of hazardous materials, follow manufacturer or Local and State recommended methods.

The following good housekeeping practices should be followed on site during the construction project:

- An effort should be made to store only enough product required to do the job.

- All materials stored on site should be stored in a neat, orderly manner in their appropriate containers and adequately protected from the environment.

- Products should be kept in their original containers with the original manufacturer's label.

- Substances should not be mixed with one another unless recommended by the manufacturer.

- Operations should be observed as necessary to ensure proper use and disposal of materials on site.

- Whenever possible, all of a product should be used up before disposing of the container.

- Manufacturer's recommendations for proper use and disposal should be followed.

J. Management of Portable Sanitary Stations

To the extent practicable, portable sanitary stations should be located in an area that does not drain to any protected natural areas, Waters of the State, or storm water structures and should be anchored to the ground to prevent from tipping over.  Portable sanitary stations located on impervious surfaces should be placed on top of a secondary containment device, or be surrounded by a control device (e.g., gravel-bag berm).  The contractor should not create or allow unsanitary conditions.  Sanitary waste should be disposed of in accordance with applicable State and/or Local regulations.

K. Spill Prevention and Clean-Up Procedures

Manufacturer's recommended methods for spill clean-up should be available and site personnel should be made aware of the procedures and the location of the information and clean-up supplies.  Materials and equipment necessary for spill clean-up should be kept in the material storage area on site. Equipment and materials should include, but are not limited to, brooms, dust pans, mops, rags, gloves, goggles, kitty litter, sand, sawdust and plastic and/or metal trash containers specifically for this purpose. Discharges of a hazardous substance or oil caused by a spill (e.g., a spill of oil into a separate storm sewer or Waters of the State) are not authorized by the ILR10 permit.  If a spill occurs, notify the Primary Contact immediately.  The construction site should have the capacity to control, contain, and remove spills, if they occur.  Spills should be cleaned up immediately (after discovery) in accordance with MSDS and should not be buried on site or washed into storm sewer drainage inlets, drainage-ways, or Waters of the State.

Spills in excess of Federal Reportable Quantities (as established under 40 CFR Parts 110, 117, or 302), should be reported to the National Response Center by calling (800) 424-8802.  MSDS often include information on Federal Reportable Quantities for materials. Spills of toxic or hazardous materials should be reported to the appropriate State or Local government agency, as required.  When cleaning up a spill, the area should be kept well ventilated and appropriate personal protective equipment should be used to minimize injury from contact with a hazardous substance.

In addition to the good housekeeping and other management practices discussed in the previous sections of these Notes, the following minimum practices should be followed to reduce the risk of spills:

- On-site vehicles should be monitored for leaks and should receive regular preventative maintenance to reduce the chance of leakage.

- Petroleum products should be stored in tightly sealed and clearly labeled containers.

- Contractors should follow the manufacturer's recommendations for proper use, storage, and disposal of materials. Excess materials should be disposed of according to the manufacturer's instructions or State and Local regulations, and should not be discharged to the storm sewer or waterbody.

L. De-Watering Operations

During de-watering/pumping operations, only uncontaminated water should be allowed to discharge to protected natural areas, Waters of the State, or to a storm sewer system (in accordance with Local permits).  Inlet hoses should be placed in a stabilized sump pit or floated at the surface of the water in order to limit the amount of sediment intake.  Pumping operations may be discharged to a stabilized area that consists of an energy dissipating device (e.g., stone), sediment filter bag, or both.  Adequate erosion controls should be used during de-watering operations as necessary. Stabilized conveyance channels should be installed to direct water to the desired location as applicable. Additional control measures may be installed at the outlet area at the discretion of the Primary Contact or Engineer.

M. Off-Site Vehicle Tracking

The site should have one or more stabilized construction entrances in conformance with the Plan details.  Stabilized construction entrance(s) should be installed to help reduce vehicle tracking of sediments.  Streets should be swept as needed to reduce excess sediment, dirt, or stone tracked from the site.  Maintenance may include top dressing the stabilized entrance with additional stone and removing top layers of stone and sediment, as needed.  Vehicles hauling erodible material to and from the construction site should be covered with a tarp.

N. Topsoil Stockpile Management

If topsoil is to be stockpiled at the site, select a location so that it will not erode, block drainage, or interfere with work on site.  Topsoil stockpiles should not be located in the 100-year floodplain or designated buffer protecting Waters of the State. During construction of the project, soil stockpiles should be stabilized or protected with sediment trapping measures.  Perimeter controls, such as silt fence, should be placed around the stockpile immediately. Stabilization of the stockpile should be completed if the stockpile is to remain undisturbed for longer than fourteen days.

O. Dust Control

Dust control should be implemented on site as necessary.  Repetitive treatment should be applied as needed to accomplish control when temporary dust control measures are used.  A water truck should be present on site (or available) for sprinkling/irrigation to limit the amount of dust leaving the site.  Watering should be applied daily (or more frequently) to be effective.  Caution should be used not to overwater, as that may cause erosion.

If field observations indicate that additional protection from wind erosion (in addition to, or in place of watering) is necessary, alternative dust suppressant controls should be implemented at the discretion and approval of the Engineer and/or Primary Contact.

Street cleaning should also be used as necessary to control dust.  Paved areas that have soil on them from the construction site should be cleaned as needed, utilizing a street sweeper or bucket-type endloader or scraper at the direction of the Engineer and/or Primary Contact.

3. MAINTENANCE

Maintenance of the controls Incorporated into this project should be performed as needed to assure their continued effectiveness.  This includes prompt and effective repair and/or replacement of deficient control measures.  The following is a description of procedures that should be used to maintain, In good and effective operating condition, erosion and sediment control measures and other protective measures identified in the SESC Plan and Standard Specifications.

Dust control:  When temporary dust control measures are used, repetitive treatment should be applied as needed to accomplish control.

Sediment filter bags:  Sediment filter bags should be installed on pump outlet hoses that discharge off site or to sensitive on-site areas, and should be placed in an area that allows for the bag to be removed without producing a sediment discharge.  The bags should be inspected frequently and repaired or replaced as needed.

Silt fence:  Silt fences should be inspected regularly for undercutting where the fence meets the ground, overtopping, and tears along the length of the fence.  Deficiencies should be repaired immediately.  Remove accumulated sediments from the fence base when the sediment reaches one-half the fence height.  During final stabilization, properly dispose of any sediment that has accumulated on the silt fence.  Alternative sediment control measures should be considered for areas where silt fence continually fails.

Stabilized construction entrance:  The stabilized construction entrances should be maintained to prevent tracking of sediment onto public streets.  Maintenance includes top dressing with additional stone and removing top layers of stone and sediment.  The sediment tracked onto the public right-of-way should be removed immediately.

Temporary sediment traps:  Temporary sediment traps should be inspected after each period of significant rainfall. Remove sediment and restore the trap to its original dimensions when the sediment has accumulated to one-half the design depth of the permanent pool.  Place the sediment that is removed in a designated disposal area.  Check the structure for damage from erosion or piping.  After all sediment-producing areas have been permanently stabilized, remove the structure and all unstable sediment.  Grade the area to blend with the adjoining areas and stabilize properly.

4. INSPECTIONS

The Permittee (or their authorized representative) will be responsible for conducting site inspections in compliance with the ILR10 NPDES Permit.  After each inspection, a report should be prepared by the qualified personnel who performed the inspection.  The inspection report should be maintained on site as part of the SWPPP.

Inspections should be conducted at least once every seven calendar days and within 24 hours or by the end of the following work day, of the end of a storm event that is 0.5 inches or greater, or equivalent snowfall.

Inspections may be reduced to once per month when construction activities have ceased due to frozen conditions. Weekly Inspections will recommence when construction activities are conducted, or if there is 0.5" or greater rain event, or a discharge due to snowmelt occurs.

Each inspection should include the following components:

A. Disturbed areas and areas used for the storage of materials that are exposed to precipitation should be inspected for evidence of, or the potential for, pollutants entering the drainage system. The erosion and sediment control measures identified in the SWPPP should be observed to ensure that they have been installed and are operating correctly.  Where discharge points are accessible, they should be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to the receiving waters.  Locations where vehicles enter or exit the site should be inspected for off-site sediment tracking.  All pumping operations and other potential non-storm water discharge sources should also be inspected.

B. Based on the results of the Inspection, the description of potential pollutant sources Identified, and the pollution prevention measures described in the SWPPP should be revised, as appropriate, as soon as practicable after the inspection.  The modifications, if any, shall provide for timely implementation of any changes to the SWPPP within 7 calendar days following the inspection.

C. A report summarizing the scope of the Inspection, name(s) and qualifications of personnel making the Inspection, the date(s) of the inspection, major observations relating to the implementation of the SWPPP, and actions taken in accordance with paragraph B, above should be made and retained as part of the SWPPP for at least three years from the date that permit coverage expires or is terminated. The report shall be signed in accordance with Part VI.G. (Signatory Requirements) of the ILR10 NPDES Permit.

D. The Permittee shall notify the appropriate agency field operations section office by e-mail at: epa.swnoncomp@illinois.gov , telephone or fax within 24 hours of any incidence of noncompliance for any violation of the storm water pollution prevention plan observed during any inspection conducted or for violation of any condition of this permit. The Permittee should complete and submit within 5 days an "Incidence of Non-Compliance" (ION) report for any violation of the SWPPP observed during an inspection conducted. Including those not required by the SWPPP. Submission should be on forms provided by IEPA and include specific  Information on the cause of non-compliance, actions which were taken to prevent any further causes of non-compliance, and a statement detailing any environmental impact, which may have resulted from the non-compliance.

E. All reports of non-compliance shall be signed by a responsible authority as defined in Part VI.G. (Signatory Requirements), of the ILR10 NPDES Permit,

F.  After the initial contact has been made within the appropriate agency field operations section office, all reports of non-compliance shall be mailed to IEPA at the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Compliance Assurance Section
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois  62794-9276

5. NON-STORM WATER DISCHARGES

Except for flows from fire fighting activities, possible sources of non-storm water that may be combined with storm water discharges associated with the proposed activity, are described below:

- Fire fighting activities
- Fire hydrant flushings
- Water used to wash vehicles where detergents are not used
- Water used to control dust
- Potable water sources including uncontaminated waterline flushings
- Landscape irrigation drainages
- Routine external building washdown which does not use detergents
- Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (unless spilled materials have been removed) and where detergents have not been used.
- Uncontaminated air conditioning condensate
- Springs
- Irrigation ditches
- Uncontaminated ground water
- Foundation or footing drains where flows are not contaminated with process materials such as solvents

6. PROHIBITED NON-STORMWATER DISCHARGES

- Concrete and wastewater from washout of concrete (unless managed by an appropriate control)
- Drywall compound
- Wastewater from washout and cleanout of stucco, paint
- Form release oils
- Curing compounds and other construction materials
- Fuels, oils, or other pollutants used in vehicle or equipment operation and maintenance
- Soaps, solvents, or detergents
- Toxic or hazardous substances from a spill or other release
- Any other pollutant that could cause or tend to cause water pollution

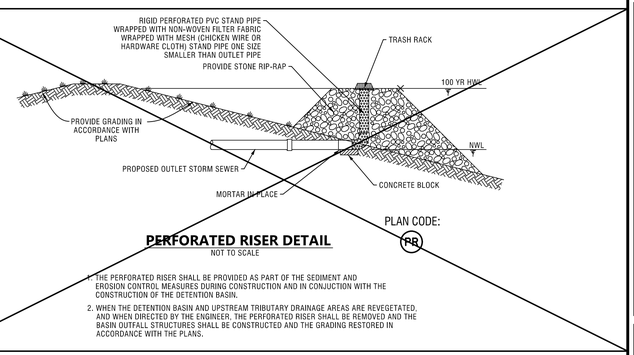
Pollution prevention measures should be implemented for non-storm water components of the discharge.

| STABILIZATION TYPE | JAN. | FEB. | MAR. | APR. | MAY | JUNE | JULY | AUG. | SEPT. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PERMANENT SEEDING | | | A | | | | | | | | | |
| DORMANT SEEDING | B | | | | | | | | | | B | |
| TEMPORARY SEEDING | | | C | | | | D | | | | | |
| SODDING | | | E** | | | | | | | | | |
| MULCHING | F | | | | | | | | | | | |

A  KENTUCKY BLUEGRASS 90 LBS/ACRE MIXED WITH PERENNIAL RYEGRASS 30 LBS/ACRE.
B  KENTUCKY BLUEGRASS 135 LBS/ACRE MIXED WITH PERENNIAL RYEGRASS 45 LBS/ACRE + STRAW MULCH 2 TONS/ACRE.
C  SPRING OATS 100 LBS/ACRE
D  WHEAT OR CEREAL RYE 150 LBS/ACRE.
E  SOD
F  STRAW MULCH 2 TONS/ACRE.

* IRRIGATION NEEDED DURING JUNE AND JULY.
** IRRIGATION NEEDED FOR 2 TO 3 WEEKS AFTER APPLYING SOD.

SOIL PROTECTION CHART




PERFORATED RISER DETAIL
NOT TO SCALE

PLAN CODE: PR

1. THE PERFORATED RISER SHALL BE PROVIDED AS PART OF THE SEDIMENT AND EROSION CONTROL MEASURES DURING CONSTRUCTION AND IN CONJUCTION WITH THE CONSTRUCTION OF THE DETENTION BASIN.
2. WHEN THE DETENTION BASIN AND UPSTREAM TRIBUTARY DRAINAGE AREAS ARE REVEGETATED, AND WHEN DIRECTED BY THE ENGINEER, THE PERFORATED RISER SHALL BE REMOVED AND THE BASIN OUTFALL STRUCTURES SHALL BE CONSTRUCTED AND THE GRADING RESTORED IN ACCORDANCE WITH THE PLANS.

CONTRACTOR CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND CONDITIONS OF THE GENERAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT (ILR10) THAT AUTHORIZES THE STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE CONSTRUCTION SITE IDENTIFIED AS PART OF THIS CERTIFICATION.

PROJECT:_____

PERMIT #:  ILR10_____

_____ DATE

_____ CONTRACTOR SIGNATURE

_____ TELEPHONE NUMBER

_____ PRINTED NAME & TITLE

_____ NAME OF CONTRACTING FIRM

_____ STREET ADDRESS

_____ CITY, STATE, ZIP CODE

TRADE/ RESPONSIBILITIES:_____

NOTE:
ALL CONTRACTORS PERFORMING WORK ON THIS SITE ARE REQUIRED TO SIGN A CONTRACTOR CERTIFICATION STATEMENT AS ILLUSTRATED ABOVE. THE SIGNED STATEMENTS WILL BE MAINTAINED ON THE SITE WITH THE SWPPP.

OWNER SWPPP CERTIFICATION

PROJECT:_____

PERMIT #:  ILR10_____

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

_____ SIGNATURE OF OWNER

_____ DATE

_____ PRINTED NAME OF OWNER

NOTE:
THE CERTIFICATION ILLUSTRATED ABOVE SHALL BE SIGNED BY THE OWNER LISTED ON THE NOTICE OF INTENT IN ACCORDANCE WITH PART VI.G. OF THE ILR10 NPDES PERMIT. THE SIGNED STATEMENT SHALL BE MAINTAINED ON THE SITE WITH THE SWPPP.

| OUTFALL NAME OR NUMBER | INLET PIPE SIZE d (IN) | VELOCITY (F/S) | LENGTH OF APRON L (FT) | RIPRAP GRADATION | WIDTH OF APRON D/S FACE 3d (FT) | WIDTH OF APRON D/S FACE 3d+L (FT) | DEPTH OF RIPRAP Y (IN) |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
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| NO. | DATE | REMARKS |
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| NO. | DATE | REVISIONS PER ARCHITECT AND STORMTRAP |
|---|---|---|
| 1 | 02/20/24 | |
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SOIL EROSION AND SEDIMENT CONTROL PLAN

OREST EXPRESS
NEW TRUCK TERMINAL
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060  Fax: (847) 696-4065

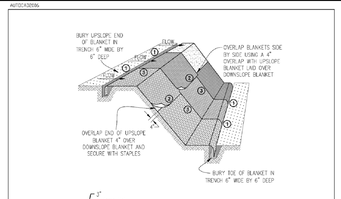
SPACECO INC.

FILENAME: 11624.03SE1
DATE: 02/16/24
JOB NO. 11624.03
SHEET SE1
11 OF 24

Attachment: Final Engineering Plans (2240 - 2266 N. Rand Road - FPD Distribution Use)

Attachment: Final Engineering Plans (2240 - 2266 N. Rand Road - FPD Distribution Use)

AMTOCA20916



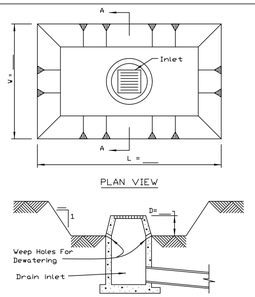

DETAIL 1 DETAIL 2 DETAIL 3

NOTES:
1. Staples shall be placed in a diamond pattern at 2 per s.y. for stitched blankets. Non-stitched shall use 4 staples per s.y. of material. This equates to 200 staples with stitched blanket and 400 staples with non-stitched blanket per 100 s.y. of material.
2. Staple or push pin lengths shall be selected based on soil type and conditions. (minimum staple length is 6")
3. Erosion control material shall be placed in contact with the soil over a prepared seedbed.
4. All anchor slots shall be stapled at approximately 12" intervals.

PLAN CODE: EB

EROSION CONTROL BLANKET INSTALLATION DETAILS

## INLET PROTECTION - EXCAVATED DRAIN PLAN




PLAN VIEW

TYPICAL SECTION A-A

NOTES:
1. Sediment shall be removed and the trap restored to its original dimensions when the sediment has accumulated to 1/2 the design depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
2. The sediment trap shall be removed and the area stabilized when the constructed drainage area has been properly stabilized.
3. All cut slopes shall be 2:1 or flatter.

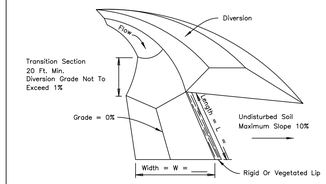
PLAN CODE: IP

REFERENCE Project Designed Date Checked Date Approved Date

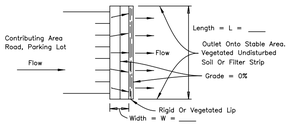
NRCS Natural Resources Conservation Service

STANDARD DWG. NO. IL-555 SHEET 1 OF 1 DATE 3-11-93

## LEVEL SPREADER




LEVEL SPREADER FOR DIVERSION OUTLET




LEVEL SPREADER FOR IMPERVIOUS AREAS

NOTES:
1. Edges of spreader shall be tied into higher ground to prevent flow around the level spreader.
2. See plans for L and W dimensions.

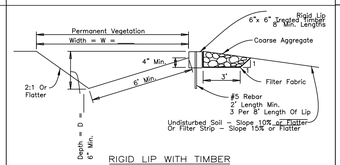
PLAN CODE: LS

REFERENCE Project Designed Date Checked Date Approved Date

NRCS Natural Resources Conservation Service

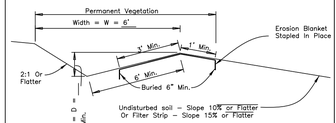
STANDARD DWG. NO. IL-570 SHEET 1 OF 2 DATE 1-29-99

## LEVEL SPREADER




RIGID LIP WITH TIMBER

(DESIGN FLOWS 4 C.F.S. TO 30 C.F.S.)




VEGETATED LIP

(DESIGN FLOWS 4 C.F.S. OR LESS)

NOTES:
1. Coarse aggregate shall meet one of the following IDOT gradations: CA-1, or CA-3.
2. Filter fabric shall meet the requirements of material specification 592 GEOTEXTILE, type I, II or III.
3. See sheet entitled STABILIZATION CLASSES IL-535 for filter strip requirements.
4. See sheet entitled EROSION BLANKET IL-530 for blanket material and installation requirements.
5. See plans for permanent seeding requirements.
6. See plans for D and W dimensions.

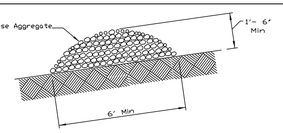
PLAN CODE: LS

REFERENCE Project Designed Date Checked Date Approved Date

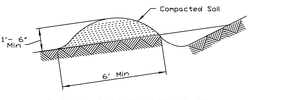
NRCS Natural Resources Conservation Service

STANDARD DWG. NO. IL-570 SHEET 2 OF 2 DATE 1-29-99

## RIGHT OF WAY DIVERSION PLAN




TYPICAL GRAVEL STRUCTURE




TYPICAL EARTHEN STRUCTURE

NOTES:
1. Install the diversion as soon as right-of-way has been cleared and graded.
2. Disc the base for the constructed ridge before placing fill.
3. Track the ridge to compact it to the design cross section.
4. Locate the outlet on an undisturbed area. Adjust field spacing of the diversion to use the most stable outlet areas. When natural areas are not deemed satisfactory, provide outlet protection.
5. Immediately seed and mulch the portions of the diversions not subject to construction traffic. Stabilize with gravel areas to be crossed by vehicles.
6. Coarse aggregate, if used, shall meet one of the following IDOT gradations: CA-1,CA-2 CA-3, OR CA-4.

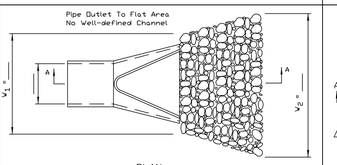
PLAN CODE: RD

REFERENCE Project Designed Date Checked Date Approved Date

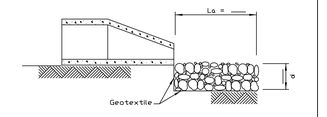
NRCS Natural Resources Conservation Service

STANDARD DWG. NO. IL-600 SHEET 1 OF 1 DATE 3-3-95

## PIPE OUTLET TO FLAT AREA




PLAN




SECTION A-A

NOTES:
1. The filter fabric shall meet the requirements in material specifications 592 GEOTEXTILE Table 1 or 2, class I, II or III.
2. The rock riprap shall shall meet the IDOT requirements for the following gradation: RR _____, Quality _____.
3. The riprap shall be placed according to construction specification 61 LOOSE ROCK RIPRAP. The rock may be equipment placed.

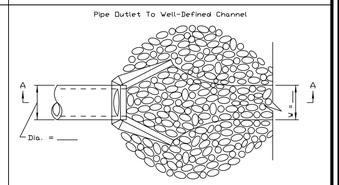
PLAN CODE: LA

REFERENCE Project Designed Date Checked Date Approved Date

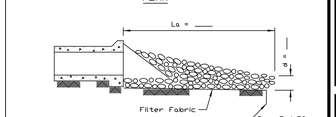
NRCS Natural Resources Conservation Service

STANDARD DWG. NO. IL-610 SHEET 1 OF 1 DATE 9-15-93

## PIPE OUTLET TO CHANNEL




PLAN




SECTION A-A

NOTES:
1. The filter fabric shall meet the requirements in material specification 592 GEOTEXTILE Table 1 or 2, Class I, II or III.
2. The rock riprap shall meet the IDOT requirements for the following gradation ____.
3. The riprap shall be placed according to construction specification 61 LOOSE ROCK RIPRAP. The rock may be equipment placed.

PLAN CODE: LA

REFERENCE Project Designed Date Checked Date Approved Date

NRCS Natural Resources Conservation Service

STANDARD DWG. NO. IL-611 SHEET 1 OF 1 DATE 8-28-94

## STABILIZED CONSTRUCTION ENTRANCE PLAN




* Must Extend Full Width Of Ingress And Egress Operation.

PLAN VIEW




SIDE ELEVATION

NOTES:
1. Filter fabric shall meet the requirements of material specification 592 GEOTEXTILE, Table I or 2, Class I, II or IV and shall be placed over the cleared area prior to the placing of rock.
2. Rock or reclaimed concrete shall meet one of the following IDOT coarse aggregate gradation, CA-1, CA-2, CA-3 or CA-4 and be placed according to construction specification 25 ROCKFILL using placement Method 1 and Class III compaction.
3. Any drainage facilities required because of washing shall be constructed according to manufacturers specifications.
4. If wash racks are used they shall be installed according to the manufacturer's specifications.

PLAN CODE: SE

REFERENCE Project Designed Date Checked Date Approved Date

NRCS Natural Resources Conservation Service

STANDARD DWG. NO. IL-630 SHEET 1 OF 2 DATE 8-18-94

## STABILIZED CONSTRUCTION ENTRANCE PLAN




SECTION A-A




SECTION B-B

PLAN CODE: SE

REFERENCE Project Designed Date Checked Date Approved Date

NRCS Natural Resources Conservation Service

STANDARD DWG. NO. IL-630 SHEET 2 OF 2 DATE 8-18-94

## SUMP PIT PLAN




SECTION

NOTES:
1. Pit dimensions are optional.
2. The standpipe will be constructed by perforating a 12"-24" diameter corrugated metal or PVC pipe.
3. A base of 2" aggregate will be placed in the pit to a minimum depth of 12". After installing the standpipe, the pit surrounding the standpipe will then be backfilled with 2" aggregate.
4. The standpipe will extend 12" to 18" above the lip of the pit.
5. If discharge will be pumped directly to a storm drainage system, the standpipe will be wrapped with Filter Fabric before installation.
6. If desired, 1/4"-1/2" hardware cloth may be placed around the standpipe prior to attaching the Filter Fabric. This will increase the rate of water seepage into the pipe.

PLAN CODE: SP

REFERENCE Project Designed Date Checked Date Approved Date

NRCS Natural Resources Conservation Service

STANDARD DWG. NO. IL-650 SHEET 1 OF 1 DATE 8-18-94

## TEMPORARY SEDIMENT TRAP




STONE SECTION

PLAN CODE: ST

REFERENCE Project Designed Date Checked Date Approved Date

NRCS Natural Resources Conservation Service

STANDARD DWG. NO. IL-660 SHEET 1 OF 1 DATE 11-05-01

## SILT FENCE PLAN SPACECO, INC. PRIMARY DETAIL




ELEVATION

FABRIC ANCHOR DETAIL

NOTES:
1. Temporary sediment fence shall be installed prior to any grading work in the area to be protected. They shall be maintained throughout the construction period and removed in conjunction with the final grading and site stabilization.
2. Filter fabric shall meet the requirements of material specification 592 Geotextile Table I or 2, Class I with equivalent opening size of at least 30 for nonwoven and 40 for woven.
3. Fence posts shall be either standard steel post or wood post with a minimum cross-sectional area of 3.0 sq. in.

PLAN CODE: XX

REFERENCE Project Designed Date Checked Date Approved Date

STANDARD DWG. NO. IUM-620A SHEET 1 OF 2 DATE 3-16-12

## SILT FENCE WITH WIRE SUPPORT PLAN SPACECO, INC. ALTERNATE DETAIL




ELEVATION

FABRIC ANCHOR DETAIL

STATIC SLICE INSTALLATION TRENCH INSTALLATION

NOTES:
1. Silt Fence shall be installed prior to any grading work in the area to be protected. They shall be maintained throughout the construction period and removed in conjunction with the final grading and site stabilization. Silt fence shall be placed on the flattest area available.
2. Filter fabric shall meet the requirements of material specification 592 Geotextile Table I or 2, Class I with equivalent opening size of at least 30 for nonwoven and 40 for woven.
3. Fence posts shall be either standard steel post or wood post with a minimum cross-sectional area of 3.0 sq. in.

PLAN CODE: XX

REFERENCE Project Designed Date Checked Date Approved Date

STANDARD DWG. NO. IUM-620A(W) SHEET 1 OF 2 DATE 3-16-2012

## TREE PROTECTION - FENCING




POST AND FENCE DETAIL

NOTES:
1. The fence shall be located a minimum of 1 Foot outside the drip line of the tree to be saved and in no case closer than 5 Feet to the trunk of any tree.
2. Fence posts shall be either standard steel posts or wood posts with a minimum cross sectional area of 3.0 sq. in.
3. The fence may be either 40" high snow fence, 42" plastic web fencing or any other material as approved by the engineer/inspector.

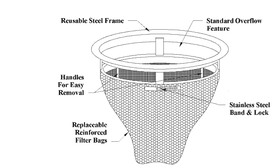
PLAN CODE: TP

REFERENCE Project Designed Date Checked Date Approved Date

NRCS Natural Resources Conservation Service

STANDARD DWG. NO. IL-690 SHEET 1 OF 1 DATE 4-7-94

**Catch-All** - is a manufactured inlet filtration device designed to significantly reduce the ingress of pollutants into stormwater systems, and therefore, improve water quality. Designs are available for a custom fit in virtually any drainage structure casting.

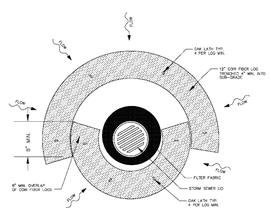



**Catch-All HR** is available to provide the added benefit of hydrocarbon removal.

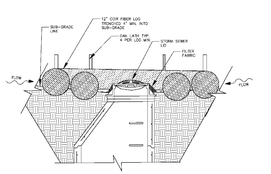
Design Benefits
1. Pollution Prevention
   - Sediment Control
2. Pollution Removal
   - Hydrocarbons (Catch-All HR)
   - Total Suspended Sediment
   - Phosphorus*
   - Nitrogen*
   - Heavy Metals*
   - *By virtue of sediment control*

Applications
1. Site Development & Highway Construction
   - Inlet Protection / Sediment Control
2. Permanent BMP
   - Maintenance Yards
   - Wash Bays
   - Parking Lots & Garages
   - Airports – Tarmac, Cab/Limo Stands, Rental Returns
   - Bank/Fast Food Drive-Ups
   - Reduce Maintenance of Underground Detention Systems
   - Reduce Maintenance of Underground Oil/Water Separators

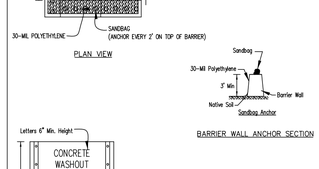
PLAN CODE: FF




YARD GRATE INLET PROTECTION
PLAN VIEW



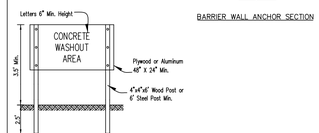

YARD GRATE INLET PROTECTION
SECTION




PLAN VIEW




BARRIER WALL ANCHOR SECTION




SIGN DETAIL

NOTES:
1. Maintaining temporary concrete washout facilities shall include removing and disposing of hardened concrete and/or slurry and returning the facilities to a functional condition.
2. Facility shall be cleaned or reconstructed in a new area once washout becomes two-thirds full.

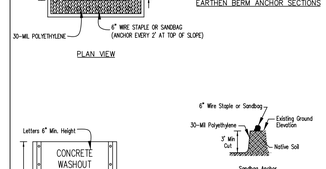
PLAN CODE: CW

REFERENCE Project Designed Date Checked Date Approved Date

NRCS Natural Resources Conservation Service

STANDARD DWG. NO. IL-650 SHEET 1 OF 1 DATE 8-18-94

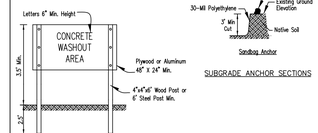
TEMPORARY CONCRETE WASHOUT FACILITY – BARRIER WALL




PLAN VIEW




EARTHEN BERM ANCHOR SECTIONS




SIGN DETAIL

SUBGRADE ANCHOR SECTIONS

NOTES:
1. Maintaining temporary concrete washout facilities shall include removing and disposing of hardened concrete and/or slurry and returning the facilities to a functional condition.
2. Facility shall be cleaned or reconstructed in a new area once washout becomes two-thirds full.

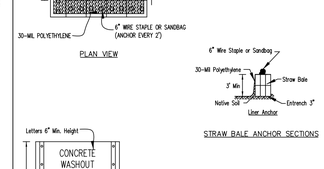
PLAN CODE: CW

REFERENCE Project Designed Date Checked Date Approved Date

NRCS Natural Resources Conservation Service

STANDARD DWG. NO. IL-650 SHEET 1 OF 1 DATE 8-18-94

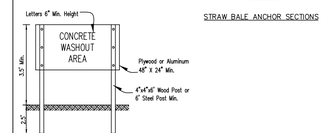
TEMPORARY CONCRETE WASHOUT FACILITY – EARTHEN TYPE




PLAN VIEW




STRAW BALE ANCHOR SECTIONS




SIGN DETAIL

NOTES:
1. Maintaining temporary concrete washout facilities shall include removing and disposing of hardened concrete and/or slurry and returning the facilities to a functional condition.
2. Facility shall be cleaned or reconstructed in a new area once washout becomes two-thirds full.
3. Each straw bale is to be staked in place using (2) 2"x2"x4' wooden stakes.

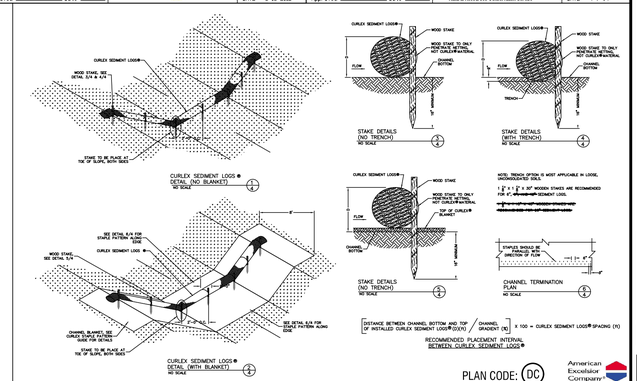
PLAN CODE: CW

REFERENCE Project Designed Date Checked Date Approved Date

NRCS Natural Resources Conservation Service

STANDARD DWG. NO. IL-650 SHEET 1 OF 1 DATE 8-18-94

TEMPORARY CONCRETE WASHOUT FACILITY – STRAW BALE




PLAN CODE: DC

AMERICAN EXCELSIOR COMPANY ARLINGTON, TEXAS

STAT DRAWING CURLEX SEDIMENT LOGS @ DITCH/CHANNEL APPLICATION DETAIL

SIZE B SCALE: NONE PROJECT NO. | SHEET NO.

American Excelsior Company An Earth Science Division

| NO. | DATE | REMARKS |
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| | | |
| 1 | 02/21/24 | REVISIONS PER ARCHITECT AND STORMTRAP |

# SOIL EROSION AND SEDIMENT CONTROL PLAN

# OREST EXPRESS
# NEW TRUCK TERMINAL
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

SPACECO INC.

FILENAME: 11624.03SE2

DATE: 02/16/24

JOB NO. 11624.03

SHEET SE2 12 OF 24

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## EARTHWORK NOTES

1. GENERAL

   A. IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE SOIL AND GROUNDWATER CONDITIONS AT THE SITE. THE CONTRACTOR SHALL OBTAIN AND READ THE GEOTECHNICAL REPORTS AVAILABLE FROM THE OWNER.

   B. ANY QUANTITIES IN THE BID PROPOSAL ARE INTENDED AS A GUIDE FOR THE CONTRACTOR'S USE IN DETERMINING THE SCOPE OF THE COMPLETED PROJECT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ALL MATERIAL QUANTITIES AND APPRAISE HIMSELF OF ALL SITE CONDITIONS. THE CONTRACT PRICE SUBMITTED BY THE CONTRACTOR SHALL BE CONSIDERED AS LUMP SUM FOR THE COMPLETE PROJECT. NO CLAIMS FOR EXTRA WORK WILL BE RECOGNIZED UNLESS ORDERED IN WRITING BY THE OWNER.

   C. THE CONTRACTOR WILL NOTE THAT THE ELEVATIONS SHOWN ON THE CONSTRUCTION PLANS ARE FINISHED GRADE ELEVATIONS AND THAT PAVEMENT THICKNESS, TOPSOIL, ETC. MUST BE SUBTRACTED TO DETERMINE SUBGRADE ELEVATIONS.

   D. THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE DURING CONSTRUCTION, AND PREVENT STORMWATER FROM RUNNING INTO OR STANDING IN EXCAVATED AREAS. THE FAILURE TO PROVIDE PROPER DRAINAGE WILL NEGATE ANY POSSIBLE ADDED COMPENSATION REQUESTED DUE TO DELAYS OR UNSUITABLE MATERIALS CREATED AS A RESULT THEREOF. FINAL GRADES SHALL BE PROTECTED AGAINST DAMAGE FROM EROSION, SEDIMENTATION AND TRAFFIC.

   E. PLANS FOR THE SITE DEWATERING, IF EMPLOYED, SHALL BE SUBMITTED TO AND APPROVED BY THE OWNER PRIOR TO IMPLEMENTATION. NO ADDITIONAL COMPENSATION SHALL BE MADE FOR DEWATERING DURING CONSTRUCTION.

   F. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTATION OF THE "SOIL EROSION AND SEDIMENTATION CONTROL MEASURES". THE INITIAL ESTABLISHMENT OF EROSION CONTROL PROCEDURES AND THE PLACEMENT OF SILT AND FILTER FENCING, ETC. TO PROTECT ADJACENT PROPERTY, WETLANDS, ETC. SHALL OCCUR BEFORE GRADING BEGINS. A MUNICIPAL EROSION CONTROL INSPECTION MAY BE REQUIRED BEFORE ANY EARTHWORK IS PERFORMED.

   G. PRIOR TO COMMENCEMENT OF GRADING ACTIVITIES, THE CONTRACTOR SHALL ERECT A "SNOW FENCE" AROUND ANY TREE DESIGNATED TO BE PRESERVED. SAID FENCE SHALL BE PLACED IN A CIRCLE CENTERED AROUND THE TREE, THE DIAMETER OF WHICH SHALL BE SUCH THAT THE ENTIRE DRIP ZONE (EXTENT OF FURTHEST EXTENDING BRANCHES) SHALL BE WITHIN THE FENCE LIMITS. THE EXISTING GRADE WITHIN THE FENCED AREA SHALL NOT BE DISTURBED.

   H. EXCESS MATERIALS, IF NOT UTILIZED AS FILL, SHALL BE COMPLETELY REMOVED FROM THE CONSTRUCTION SITE AND DISPOSED OF OFF-SITE BY THE CONTRACTOR.

   I. ALL EARTHWORK SHALL BE DONE UNDER THE SUPERVISION OF AN ILLINOIS LICENSED ENGINEER WHO SPECIALIZES IN THE GEOTECHNICAL FIELD (SOILS ENGINEER). THIS ENGINEER WILL BE RESPONSIBLE FOR ENSURING THAT ALL UNSUITABLE MATERIALS ARE REMOVED, ALL STRUCTURAL FILL MATERIALS ARE PROPERLY PLACED AND COMPACTED, ALL PAVEMENT SUBGRADES ARE PROPERLY PREPARED, PROOF ROLLING SUBGRADES AND BASE COURSES, AND ENSURING THAT ALL WATER RETAINING EMBANKMENTS ARE PROPERLY CONSTRUCTED. THE DEVELOPER PAYS FOR ALL GEOTECHNICAL SERVICES.

2. TOPSOIL EXCAVATION INCLUDES:

   A. EXCAVATION OF TOPSOIL AND OTHER STRUCTURALLY UNSUITABLE MATERIALS WITHIN THOSE AREAS THAT WILL REQUIRE EARTH EXCAVATION OR COMPACTED EARTH FILL MATERIAL. EXISTING VEGETATION SHALL BE REMOVED PRIOR TO STRIPPING TOPSOIL OR FILLING AREAS.

   B. PLACEMENT OF THE EXCAVATED MATERIAL IN OWNER DESIGNATED AREAS FOR FUTURE USE WITHIN AREAS TO BE LANDSCAPED, AND THOSE AREAS NOT REQUIRING STRUCTURAL FILL MATERIAL. PROVIDE NECESSARY EROSION CONTROL MEASURES FOR STOCKPILE.

   C. TOPSOIL STOCKPILED FOR RESPREAD SHALL BE FREE OF CLAY AND SHALL NOT CONTAIN ANY OF THE TRANSITIONAL MATERIAL BETWEEN THE TOPSOIL AND CLAY. THE TRANSITIONAL MATERIAL SHALL BE USED IN NON-STRUCTURAL FILL AREAS OR DISPOSED OF OFF-SITE.

   D. TOPSOIL RESPREAD SHALL INCLUDE HAULING AND SPEADING 6" OF TOPSOIL OVER AREAS TO BE LANDSCAPED WHERE SHOWN ON THE PLANS OR DIRECTED BY THE OWNER.

   E. MODERATE COMPACTION IS REQUIRED IN NON-STRUCTURAL FILL AREAS.

3. EARTH EXCAVATION INCLUDES:

   A. EXCAVATION OF CLAY AND OTHER MATERIALS WHICH ARE SUITABLE FOR USE AS STRUCTURAL FILL. THE EXCAVATION SHALL BE TO WITHIN A TOLERANCE OF 0.1 FEET OF THE PLAN SUBGRADE ELEVATIONS WHILE MAINTAINING PROPER DRAINAGE. THE TOLERANCE WITHIN PAVEMENT AREAS SHALL BE SUCH THAT THE EARTH MATERIALS SHALL "BALANCE" DURING THE FINE GRADING OPERATION.

   B. PLACEMENT OF THE CLAY AND OTHER SUITABLE MATERIALS SHALL BE WITHIN THOSE AREAS REQUIRING STRUCTURAL FILL IN ORDER TO ACHIEVE THE PLAN SUBGRADE ELEVATIONS TO WITHIN A TOLERANCE OF 0.1 FEET. THE FILL MATERIAL SHALL BE PLACED IN LOOSE LIFTS THAT SHALL NOT EXCEED EIGHT (8) INCHES IN THICKNESS, AND THE WATER CONTENT SHALL BE ADJUSTED IN ORDER TO ACHIEVE REQUIRED COMPACTION.

      STRUCTURAL FILL MATERIAL MAY BE PLACED WITHIN THOSE PORTIONS OF THE SITE NOT REQUIRING STRUCTURAL FILL, TO WITHIN SIX (6) INCHES OF THE PLAN FINISHED GRADE ELEVATION, IN AREAS REQUIRING STRUCTURAL FILL. HOWEVER, THIS MATERIAL SHALL NOT BE PLACED OVER TOPSOIL OR OTHER UNSUITABLE MATERIALS UNLESS SPECIFICALLY DIRECTED BY A SOILS ENGINEER WITH THE CONCURRENCE OF THE OWNER.

   C. COMPACTION OF THE CLAY AND OTHER SUITABLE MATERIALS, SHALL BE TO AT LEAST 93% OF THE MODIFIED PROCTOR DRY DENSITY WITHIN PROPOSED PAVEMENT AREAS, SIDEWALK, ETC. COMPACTION SHALL BE AT LEAST 95% OF THE MODIFIED PROCTOR WITHIN PROPOSED BUILDING PAD AREAS.

   D. EXCAVATION: QUANTITIES OF EARTH EXCAVATION INDICATED ELSEWHERE IN THIS CONTRACT HAVE BEEN COMPUTED BY THE END AREA METHOD AS PROVIDED FOR IN SECTION 202 OF THE STANDARD SPECIFICATIONS. EXCAVATED MATERIALS NOT NEEDED FOR THIS JOB SITE SHALL BE LEGALLY DISPOSED OF. PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE PER CUBIC YARD OF EARTH EXCAVATION.

4. UNSUITABLE MATERIAL

   UNSUITABLE MATERIAL SHALL BE CONSIDERED AS MATERIAL WHICH IS NOT SUITABLE FOR THE SUPPORT OF PAVEMENT AND BUILDING CONSTRUCTION, AND IS ENCOUNTERED BELOW NORMAL TOPSOIL DEPTHS AND THE PROPOSED SUBGRADE ELEVATION. THE DECISION TO REMOVE SAID MATERIAL, AND TO WHAT EXTENT, SHALL BE MADE BY A SOILS ENGINEER WITH THE CONCURRENCE OF THE OWNER.

5. MISCELLANEOUS THE CONTRACTOR SHALL:

   A. SPREAD AND COMPACT UNIFORMLY TO THE DEGREE SPECIFIED ALL EXCESS TRENCH SPOIL AFTER COMPLETION OF THE UNDERGROUND IMPROVEMENTS.

   B. SCARIFY, DISC, AERATE, AND COMPACT, TO THE DEGREE SPECIFIED, THE UPPER TWELVE (12) INCHES OF THE SUITABLE SUBGRADE MATERIAL, IN ALL AREAS THAT MAY BE SOFT DUE TO EXCESS MOISTURE CONTENT. THIS APPLIES TO CUT AREAS AS WELL AS FILL AREAS.

   C. PROVIDE WATER TO ADD TO DRY MATERIAL IN ORDER TO ADJUST THE MOISTURE CONTENT FOR THE PURPOSE OF ACHIEVING THE SPECIFIED COMPACTION.

   D. BACKFILL THE CURB AND GUTTER AFTER ITS CONSTRUCTION AND PRIOR TO THE PLACEMENT OF THE BASE COURSE MATERIAL. THE CURBS SHALL NOT BE BACKFILLED UNTIL THE CONCRETE HAS CURED FOR AT LEAST 7 DAYS.

   E. TRENCH COMPACTION: ALL TRENCHES SHALL BE COMPACTED BY MECHANICAL TECHNIQUES APPROVED BY THE SOILS ENGINEER UNTIL PROPER COMPACTION IS ACHIEVED. THE REQUIREMENT FOR MECHANICAL COMPACTION MAY BE WAIVED IF, IN THE OPINION OF THE SOILS ENGINEER AND THE MUNICIPAL ENGINEER, THE BACKFILLED TRENCHES MEET THE DENSITY REQUIREMENTS. JETTING OF TRENCHES FOR COMPACTION WILL NOT BE ALLOWED.

6. TESTING AND FINAL ACCEPTANCE

   A. THE CONTRACTOR SHALL PROVIDE AS A MINIMUM, A FULLY LOADED SIX-WHEEL TANDEM AXLE TRUCK FOR PROOF ROLLING THE PAVEMENT SUBGRADE PRIOR TO THE PLACEMENT OF THE CURB AND GUTTER AND THE BASE MATERIAL. THIS SHALL BE WITNESSED BY MUNICIPAL ENGINEER AND THE OWNER. SEE PAVING SPECIFICATION.

   B. ANY UNSUITABLE AREA ENCOUNTERED AS A RESULT OF PROOF ROLLING SHALL BE REMOVED AND REPLACED WITH SUITABLE MATERIAL, OR OTHERWISE CORRECTED, APPROVED BY THE SOILS CONSULTANT.

   C. ANY TESTING THAT IS REQUIRED OF THIS CONSTRUCTION IS CONSIDERED INCIDENTAL TO THE COST OF CONSTRUCTION. NO SEPARATE PAYMENT WILL BE MADE.

## SIGNING AND PAVEMENT MARKING

1. ALL SIGNING AND PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH THE ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (SSRBC), MUNICIPAL CODE AND THESE PLANS.
2. CONTRACTOR SHALL ESTABLISH LOCATION OF ALL SIGNS AND MARKINGS FOR APPROVAL BY THE OWNER PRIOR TO INSTALLATION.
3. SIGNS: SIGNS SHALL BE CONSTRUCTED OF 0.080 INCH THICK FLAT ALUMINUM PANELS WITH REFLECTORIZED LEGEND ON THE FACE IN ACCORDANCE WITH (SSRBC) SECTION 720. LEGEND SHALL BE IN ACCORDANCE WITH MUTCD AND AS SHOWN ON THE PLANS.
4. POSTS: SIGN POSTS SHALL BE A HEAVY DUTY STEEL "U" SHAPED CHANNEL WEIGHING 3.0 POUNDS/FOOT SUCH AS A TYPE B METAL POST PER (SSRBC) SECTION 729 [OR: 2" PERFORATED STEEL TUBE PER (SSRBC) SECTION 728].
5. SIGNS AND POSTS SHALL BE INSTALLED IN ACCORDANCE WITH THE ABOVE (SSRBC) SECTIONS AND IDOT STANDARD 729001 EXCEPT AS MODIFIED BY THE PLANS.
6. PAVEMENT MARKINGS: ALL PAVEMENT MARKINGS IN THE ROADWAY LIMITS, SUCH AS STOP LINES, CENTERLINES, CROSSWALKS AND DIRECTIONAL ARROWS SHALL BE REFLECTORIZED THERMOPLASTIC PER (SSRBC) SECTION 780, EXCEPT AS MODIFIED BY THE PLANS. [NOTE TO ENGINEER: IDOT PREFERS REFLECTORIZED PAINT ON CONCRETE PAVEMENT - CHECK WITH AGENCY WHO WILL MAINTAIN ROAD.]
7. PAVEMENT MARKINGS ON BIKE PATHS, PARKING LOT STALLS, AND SIMILAR "LOW WEAR" APPLICATION, SHALL BE PAINT IN ACCORDANCE TO (SSRBC) SECTION 780, EXCEPT AS MODIFIED BY THE PLANS. REFLECTIVE BEADS ARE NOT REQUIRED.
8. COLOR, WIDTH, STYLE, AND SIZE OF ALL MARKINGS SHALL BE IN ACCORDANCE WITH (MUTCD) EXCEPT AS MODIFIED BY THE PLANS.
9. THERMOPLASTIC MARKINGS SHALL BE INSTALLED WHEN THE PAVEMENT TEMPERATURE IS 55° F AND RISING. PAINT MARKINGS MAY BE INSTALLED WHEN THE AIR TEMPERATURE IS 50° F AND RISING.

## PAVING NOTES

1. GENERAL

   A. PAVING WORK INCLUDES FINAL SUBGRADE SHAPING, PREPARATION AND COMPACTION; PLACEMENT OF SUB-BASE OR BASE COURSE MATERIALS; BITUMINOUS BINDER AND/OR SURFACE COURSES; FORMING, FINISHING AND CURING CONCRETE PAVEMENT, CURBS AND WALKS; AND FINAL CLEAN-UP AND ALL RELATED WORK.

   B. COMPACTION REQUIREMENTS: [REFERENCE ASTM D-1557 (MODIFIED PROCTOR)] SUB-GRADE = 93%; SUB-BASE = 93%; AGGREGATE BASE COURSE = 95%; BITUMINOUS COURSES = REFER TO SSRBC ARTICLE 406.07. THE SOILS ENGINEER IS RESPONSIBLE FOR ENSURING THAT MATERIALS ARE PROPERLY PLACED AND COMPACTED.

   C. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO PROVIDE PROPER BARRICADING, WARNING DEVICES AND THE SAFE MANAGEMENT OF TRAFFIC WITHIN THE AREA OF CONSTRUCTION. ALL SUCH DEVICES AND THEIR INSTALLATION SHALL CONFORM TO THE ILLINOIS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION AND IN ACCORDANCE WITH THE MUNICIPAL CODE.

2. SUB-GRADE PREPARATION

   A. EARTHWORK FOR PROPOSED PAVEMENT SUBGRADE SHALL BE FINISHED TO WITHIN 0.1 FOOT, PLUS OR MINUS, OF PLAN ELEVATION. THE CONTRACTOR SHALL SATISFY HIMSELF THAT THE SUBGRADE HAS BEEN PROPERLY PREPARED AND THAT THE FINISH TOP SUBGRADE ELEVATION HAS BEEN GRADED WITHIN TOLERANCES ALLOWED IN THESE SPECIFICATIONS. UNLESS THE CONTRACTOR ADVISES THE OWNER AND ENGINEER IN WRITING PRIOR TO FINE GRADING FOR BASE COURSE CONSTRUCTION, IT IS UNDERSTOOD THAT HE HAS APPROVED AND ACCEPTS THE RESPONSIBILITY FOR THE SUBGRADE.

   B. PRIOR TO THE PLACEMENT OF THE BASE COURSE, THE SUBGRADE MUST BE PROOF ROLLED AND INSPECTED FOR UNSUITABLE MATERIALS AND/OR EXCESSIVE MOVEMENT. THE SOILS ENGINEER SHALL CONDUCT AND THE VILLAGE SHALL WITNESS ALL PROOF ROLLS. IF UNSUITABLE SUBGRADE IS ENCOUNTERED, IT SHALL BE CORRECTED IN A MANNER APPROVED BY THE OWNER OR HIS REPRESENTATIVE. THIS MAY INCLUDE ONE OR MORE OF THE FOLLOWING METHODS:
      1) SCARIFY DISC AND AERATE.
      2) REMOVE AND REPLACE WITH STRUCTURAL CLAY FILL.
      3) REMOVE AND REPLACE WITH GRANULAR MATERIAL.
      4) USE OF GEOTEXTILE FABRIC.

      MAXIMUM DEFLECTION ALLOWED IN ISOLATED AREAS MAY BE 1/4" TO 1/2" IF NO DEFLECTION OCCURS OVER THE MAJORITY OF THE AREA.

   C. PRIOR TO THE CONSTRUCTION OF THE CURB AND GUTTER AND THE PLACEMENT OF THE BASE MATERIAL, THE PAVEMENT AREA SHALL BE FINE GRADED TO WITHIN 0.04 FEET (1/2") OF FINAL SUBGRADE ELEVATION, TO A POINT TWO (2) FEET BEYOND THE BACK OF CURB, SO AS TO INSURE THE PROPER THICKNESS OF PAVEMENT COURSES. NO CLAIMS FOR EXCESS QUANTITY OF BASE MATERIALS DUE TO IMPROPER SUBGRADE PREPARATION WILL BE HONORED.

   D. PRIOR TO PLACEMENT OF THE BASE COURSE, ALL SUBGRADES MUST BE APPROVED BY THE MUNICIPAL ENGINEER, SOILS ENGINEER AND/OR OWNER.

3. CONCRETE WORK

   A. ALL EXTERIOR CONCRETE SHALL BE PORTLAND CEMENT CONCRETE CLASS SI OR PV PER (SSRBC) SECTION 1020.04 WITH AIR ENTRAINMENT OF NOT LESS THAN FIVE (5%) OR MORE THAN EIGHT (8%) PERCENT. CONCRETE SHALL BE A MINIMUM OF SIX (6) BAG MIX AND SHALL DEVELOP A MINIMUM OF 3,500 PSI COMPRESSIVE STRENGTH AT FOURTEEN (14) DAYS. ALL CONCRETE SHALL BE BROOM FINISHED PERPENDICULAR TO THE DIRECTION OF TRAVEL. THE ADDITION OF CALCIUM CHLORIDE AND THE SUBSTITUTION OF FLY ASH FOR PORTLAND CEMENT IS PROHIBITED. 1.50 lbs OF COLLATED, FILLIBRATED, POLYPROPYLENE OLEFIN FIBERS 0.50 TO 0.75 INCHES IN LENGTH SHALL BE ADDED TO EACH CUBIC YARD OF CONCRETE USED FOR SIDEWALKS. THE FIBERS SHALL BE AS MANUFACTURED UNDER THE NAME "FIBERMESH" OR EQUAL.

   B. CONCRETE CURB AND/OR COMBINATION CURB AND GUTTER SHALL BE OF THE TYPE SHOWN ON THE PLANS. THE CONTRACTOR IS CAUTIONED TO REFER TO THE CONSTRUCTION STANDARDS AND THE PAVEMENT CROSS-SECTION TO DETERMINE THE GUTTER FLAG THICKNESS AND THE AGGREGATE BASE COURSE THICKNESS BENEATH THE CURB AND GUTTER. PREMOLDED FIBER EXPANSION JOINTS, WITH TWO 3/4" X 18" EPOXY COATED STEEL DOWEL BARS, SHALL BE INSTALLED AT SIXTY (60) FOOT INTERVALS AND AT ALL PC'S, PT'S AND CURB RETURNS. ALTERNATE ENDS OF THE DOWEL BARS SHALL BE GREASED AND FITTED WITH METAL EXPANSION TUBES. SAWED OR FORMED CONTRACTION JOINTS SHALL BE PROVIDED AT NO GREATER THAN FIFTEEN (15) FOOT INTERVALS BETWEEN EXPANSION JOINTS. NO HONEY-COMBING OF THE CURB AND GUTTER WILL BE ACCEPTED.

   C. CURBS SHALL BE DEPRESSED AT LOCATIONS WHERE PUBLIC WALKS/PEDESTRIAN PATHS INTERSECT CURB LINES, AND OTHER LOCATIONS AS DIRECTED, FOR THE PURPOSE OF PROVIDING ACCESSIBILITY. (SEE CONSTRUCTION STANDARDS FOR DETAIL). BARRIER CURB SHALL ALSO BE DEPRESSED AT DRIVEWAY LOCATIONS.

   D. THE CURBS SHALL BE BACKFILLED AFTER THEIR CONSTRUCTION AND PRIOR TO THE PLACEMENT OF THE BASE COURSE. THE CONCRETE MUST CURE FOR AT LEAST SEVEN DAYS BEFORE THE CURBS ARE BACKFILLED.

   E. CONCRETE SIDEWALK SHALL BE IN ACCORDANCE WITH THE ABOVE AND THE PLANS. PROVIDE SCORED JOINTS AT 5 FOOT INTERVALS AND 1/2 " PREMOLDED FIBER EXPANSION JOINTS AT 50 FOOT INTERVALS, AND ADJACENT TO CONCRETE CURBS, DRIVEWAYS, FOUNDATIONS, ETC.

   F. CONCRETE DRIVEWAY APRONS SHALL BE IN ACCORDANCE WITH THE ABOVE AND THE PLANS, PROVIDE 6" X 6" NO. 6 WELDED WIRE MESH IN DRIVEWAYS. PROVIDE 1/2 " PREMOLDED FIBER EXPANSION JOINT ADJACENT TO CURBS AND CONCRETE SIDEWALKS. PROVIDE SAWED OR FORMED CONTRACTION JOINT AT MID-POINT AND 15 FOOT MAXIMUM.

   G. STANDARD REINFORCED CONCRETE PAVEMENT SHALL BE IN ACCORDANCE WITH THE ABOVE AND THE PLANS. SAWED OR FORMED CONTRACTION EXPANSION JOINTS SHALL BE AS SHOWN ON THE PLANS.

   H. CONCRETE CURING AND PROTECTION SHALL BE IN ACCORDANCE WITH (SSRBC) - METHOD I, II, OR III.

   I. THE COST OF AGGREGATE BASE OR SUB-BASE UNDER CONCRETE WORK SHALL BE INCLUDED IN THE COST OF THE RESPECTIVE CONCRETE ITEM.

4. FLEXIBLE PAVEMENT

   A. THE PAVEMENT MATERIALS FOR BITUMINOUS STREETS, PARKING LOTS, DRIVEWAYS, SIDEWALKS AND PATHS SHALL BE AS DETAILED ON THE PLANS. UNLESS OTHERWISE SHOWN ON THE PLANS, THE FLEXIBLE PAVEMENTS SHALL CONSIST OF AGGREGATE BASE COURSE, TYPE B; BITUMINOUS CONCRETE BINDER COURSE; AND BITUMINOUS CONCRETE SURFACE COURSE; OF THE THICKNESS AND MATERIALS SPECIFIED ON THE PLANS. THICKNESSES SPECIFIED SHALL BE CONSIDERED TO BE THE MINIMUM COMPACTED THICKNESS. THE PAVING IS TO BE DONE IN ACCORD WITH THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION IN ILLINOIS.

   B. ALL TRAFFIC SHALL BE KEPT OFF THE COMPLETED AGGREGATE BASE UNTIL THE BINDER COURSE IS LAID. THE AGGREGATE BASE SHALL BE UNIFORMLY PRIME COATED AT A RATE OF 0.4 TO 0.5 GALLONS PER SQUARE YARD PRIOR TO PLACING THE BINDER COURSE. PRIME COAT MATERIALS SHALL BE BITUMINOUS M.C. - 30.

   C. PRIOR TO PLACEMENT OF THE SURFACE COURSE, THE BINDER COURSE SHALL BE CLEANED, AND TACK COATED IF DUSTY OR DIRTY. ALL DAMAGED AREAS IN THE BINDER, BASE OR CURB SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER PRIOR TO LAYING THE SURFACE COURSE. THE CONTRACTOR SHALL PROVIDE WHATEVER EQUIPMENT AND MANPOWER NECESSARY, INCLUDING THE USE OF POWER BROOMS IF REQUIRED BY THE OWNER, TO PREPARE THE PAVEMENT FOR APPLICATION OF THE SURFACE COURSE. THE TACK COAT SHALL BE UNIFORMLY APPLIED TO THE BINDER COURSE AT A RATE OF 0.05 TO 0.10 GALLONS PER SQUARE YARD. TACK COAT SHALL BE AS SPECIFIED IN (SSRBC) SECTION 406.02.

   D. SEAMS IN BASE, BINDER AND SURFACE COURSE SHALL BE STAGGERED A MINIMUM OF 6".

   E. FOR NEW STREETS, THE CONTRACTOR SHALL PERMIT THE BITUMINOUS CONCRETE BINDER COURSE TO WEATHER ONE (1) WINTER SEASON PRIOR TO THE INSTALLATION OF THE BITUMINOUS CONCRETE SURFACE COURSE UNLESS OTHERWISE SPECIFIED BY THE MUNICIPAL ENGINEER OR OWNER.

5. TESTING AND FINAL ACCEPTANCE

   A. THE CONTRACTOR SHALL FOLLOW THE QUALITY CONTROL TESTING PROGRAM FOR CONCRETE AND PAVEMENT MATERIALS ESTABLISHED BY THE OWNER AND/OR MUNICIPALITY. TESTING SHALL BE DONE IN ACCORD WITH THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION IN ILLINOIS AND THE TESTING REQUIREMENTS OF THE MUNICIPALITY.

   B. WHEN REQUESTED BY THE OWNER, TEST RESULTS AND DOCUMENTATION FOR THE CONCRETE, BASE COURSE, BITUMINOUS CONCRETE BINDER, AND/OR SURFACE COURSE, SHALL BE SUBMITTED FOR VERIFICATION.

   C. PRIOR TO PLACEMENT OF THE BITUMINOUS CONCRETE SURFACE COURSE, THE CONTRACTOR, WHEN REQUIRED BY THE OWNER OR MUNICIPALITY, SHALL OBTAIN SPECIMENS OF THE BINDER COURSE WITH A CORE DRILL WHERE DIRECTED, FOR THE PURPOSE OF THICKNESS VERIFICATION.

   D. WHEN REQUIRED BY THE OWNER OR MUNICIPALITY, THE CONTRACTOR SHALL OBTAIN SPECIMENS OF THE FULL DEPTH BITUMINOUS CONCRETE PAVEMENT STRUCTURE WITH A CORE DRILL WHERE DIRECTED, IN ORDER TO CONFIRM THE PLAN THICKNESS. DEFICIENCIES IN THICKNESS SHALL BE ADJUSTED FOR BY THE METHOD DESCRIBED IN (SSRBC), ART. 407.10.

   E. FINAL ACCEPTANCE OF THE TOTAL PAVEMENT INSTALLATION SHALL BE SUBJECT TO THE TESTING AND CHECKING REQUIREMENTS CITED ABOVE.

## SANITARY SEWER NOTES

1. GENERAL

   A. SANITARY SEWER PIPE SHALL BE PVC (POLYVINYL CHLORIDE) PLASTIC PIPE WITH A STANDARD DIMENSION RATIO (SDR) OF 26 CONFORMING TO ASTM D-3034 WITH PUSH-ON JOINTS CONFORMING TO ASTM D-3212 AND PVC (POLYVINYL CHLORIDE) PLASTIC PIPE WITH A STANDARD DIMENSION RATIO (SDR) OF 21 CONFORMING TO ASTM D-2241 WITH PUSH-ON JOINTS CONFORMING TO ASTM D-3139 AS SHOWN ON THE PLANS. PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE PER LINEAL FOOT OF SANITARY SEWER COMPLETE IN PLACE.

   B. SANITARY SEWER PIPE 18" AND LARGER, WHERE NOTED ON THE PLANS, OR WHERE THE IEPA MINIMUM SEPARATION CANNOT BE MAINTAINED, SHALL BE ONE OF THE FOLLOWING:

      PLAN CODE DESCRIPTION

      DIP: DUCTILE IRON WATERMAIN QUALITY PIPE, CLASS 52, (ANSI A-21.51) WITH MECHANICAL OR O-RING GASKETED JOINTS (ANSI A-21.11).

      PVC: PRESSURE RATED PVC PIPE MEETING ASTM D-2241 WITH ASTM D-3139 GASKETED JOINT, SDR 26

   C. "BAND-SEAL" OR SIMILAR FLEXIBLE TYPE COUPLINGS SHALL BE USED WHEN CONNECTING SEWER PIPES OF DISSIMILAR MATERIALS. "BAND-SEAL", "FERNCO", AND "MISSION" TYPE COUPLINGS SHALL NOT BE USED ON ANY SEWER MAIN.

   D. ALL SANITARY SEWERS ARE TO BE CONSTRUCTED USING A LASER INSTRUMENT TO MAINTAIN LINE AND GRADE.

   E. ALL FLOOR DRAINS SHALL CONNECT TO THE SANITARY SEWER.

   F. CONNECTIONS TO EXISTING SANITARY SEWER SYSTEM SHALL NOT BE DONE UNTIL AUTHORIZED BY THE MUNICIPALITY.

   G. WATERMAINS SHALL BE SEPARATED FROM SANITARY SEWERS AND STORM SEWERS IN ACCORDANCE WITH IEPA REQUIREMENTS AS SPECIFIED IN "WATER MAIN" SECTION.

   H. NO WATER LINE SHALL BE PLACED IN THE SAME TRENCH AS A SEWER LINE EXCEPT UNDER SPECIAL CIRCUMSTANCES AND THEN ONLY UNDER THE FOLLOWING RULES:

      a) PERMISSION SHALL BE OBTAINED FROM THE MUNICIPAL ENGINEERING DEPARTMENT IN WRITING PRIOR TO BEGINNING CONSTRUCTION.
      b) THE BOTTOM OF A WATER LINE SHALL BE INSTALLED ON A SHELF A MINIMUM OF 18" ABOVE THE TOP OF THE SEWER AND 18" HORIZONTALLY AWAY FROM THE EDGE OF THE SEWER.

2. BEDDING:

   A. BEDDING SHALL CONSIST OF A MINIMUM OF FOUR (4") INCHES OF COMPACTED CRUSHED GRAVEL OR STONE, 1/4 " -3/4 " IN SIZE. THE SEWER SHALL HAVE MECHANICALLY TAMPED CRUSHED GRAVEL OR STONE COVER ABOVE THE TOP OF THE PIPE TO A MINIMUM OF TWELVE (12") INCHES FOR PVC PIPE AND TO THE SPRING LINE FOR DIP. THE BEDDING AND COVER MATERIAL SHALL BE ASTM D-2321 CLASS II FOR PVC PIPE AND ASTM D-448 SIZE 67 FOR DIP PIPE. THE COST OF THE BEDDING AND COVER SHALL BE MERGED WITH THE UNIT PRICE BID FOR THE SEWER.

   B. ALL UNSUITABLE MATERIAL SHALL BE REMOVED BELOW THE PROPOSED SANITARY SEWER AND REPLACED WITH COMPACTED CA-6 CRUSHED GRAVEL OR STONE.

   C. ALL TRENCHES BENEATH PROPOSED OR EXISTING UTILITIES, PAVEMENTS, ROADWAYS, SIDEWALKS, AND FOR A DISTANCE OF FIVE (5') FEET ON EITHER SIDE OF SAME, AND/OR WHERE SHOWN ON THE PLANS, SHALL BE BACKFILLED WITH SELECT GRANULAR BACKFILL (CA-6) AND THOROUGHLY MECHANICALLY COMPACTED IN 9" THICK (LOOSE MEASUREMENT) LAYERS. JETTING WITH WATER IS NOT PERMITTED. REFER TO THE TRENCH BACKFILL LIMITS DETAIL.

3. MANHOLES:

   A. SANITARY SEWER MANHOLES SHALL BE 4'-0" I.D. PRECAST CONCRETE SECTIONS CONFORMING TO ASTM D-478 WITH PREFORMED BITUMINOUS OR "O" RING JOINTS, IN ACCORDANCE WITH MUNICIPAL REGULATIONS, AND HAVE AN ECCENTRIC CONE INSTALLED TO LINE UP WITH THE MANHOLE STEPS. ALL MANHOLE STEPS SHALL BE AT 16" O.C. SIMILAR TO NEENAH R-1980.

   B. ALL PIPE CONNECTION OPENINGS SHALL BE PRECAST WITH RESILIENT RUBBER WATER TIGHT SLEEVES. THE BOTTOM OF MANHOLE SHALL HAVE A CONCRETE BENCH POURED TO FACILITATE SMOOTH FLOWS.

4. FRAMES AND LIDS:

   A. ALL SANITARY SEWER MANHOLE FRAMES AND LIDS SHALL BE NEENAH R-1712 UNLESS OTHERWISE NOTED ON THE PLANS. THE LIDS SHALL HAVE RECESSED (CONCEALED) PICK HOLE AND BE SELF SEALING WITH AN "O" RING GASKET. THE LIDS SHALL HAVE THE WORDS "SANITARY" EMBOSSED ON THE SURFACE. THE JOINTS BETWEEN FRAME AND CONCRETE SECTION SHALL BE SEALED WITH A BUTYL ROPE.

   B. A MAXIMUM OF EIGHT (8) INCHES OF CONCRETE ADJUSTING RINGS SHALL BE USED TO ADJUST FRAME ELEVATIONS. RINGS SHALL BE SEALED TOGETHER WITH BUTYL ROPE.

5. DROP MANHOLE ASSEMBLIES:

   A. DROP MANHOLE ASSEMBLIES: DROP MANHOLE ASSEMBLIES SHALL BE PROVIDED AT THE JUNCTION OF SANITARY SEWERS WHERE THE DIFFERENCE IN INVERT GRADES EXCEEDS TWO FEET (2'), OR AS SHOWN ON THE PLANS. THE ENTIRE DROP ASSEMBLY SHALL BE CAST IN CONCRETE MONOLITHICALLY WITH THE MANHOLE BARREL SECTION.

6. CLEANING:

   A. ALL MANHOLES AND PIPES SHALL BE THOROUGHLY CLEANED OF DIRT AND DEBRIS, AND ALL VISIBLE LEAKAGE ELIMINATED, BEFORE FINAL INSPECTION AND ACCEPTANCE.

7. TESTING:

   A. DEFLECTION AND LEAKAGE TESTING WILL BE REQUIRED. THE PROCEDURE AND ALLOWABLE TESTING LIMITS SHALL BE AS SPECIFIED IN THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS", OR MUNICIPAL CODES. IN THE EVENT OF A DISCREPANCY BETWEEN THE STANDARD SPECIFICATIONS AND THE MUNICIPAL CODE. THE MUNICIPAL CODE SHALL GOVERN. THE FULL LENGTH OF THE SANITARY SEWER IS REQUIRED TO BE BOTH AIR TESTED AND DEFLECTION TESTED.

   B. TESTING THE ALIGNMENT/STRAIGHTNESS SHALL BE IN ACCORDANCE WITH MUNICIPAL CODE.

   C. TESTING OF MANHOLES TO BE IN ACCORDANCE WITH ASTM C-969.

8. TELEVISING:

   A. ALL SANITARY SEWERS SHALL BE TELEVISED AND A COPY OF THE TAPE /DVD AND A WRITTEN REPORT SHALL BE SUBMITTED AND REVIEWED BY THE OWNER OR MUNICIPALITY BEFORE FINAL ACCEPTANCE. THE REPORT SHALL INCLUDE STUB LOCATION AS WELL AS A DESCRIPTION OF ALL DEFECTS, WATER LEVEL, LEAKS AND LENGTHS. IDENTIFY MANHOLE TO MANHOLE BOTH VERBALLY AND ON-SCREEN USING MANHOLE NUMBERS FROM APPROVED PLANS. ORDER OF WRITTEN REPORT SHALL BE THE SAME AS THE VIDEO TAPES/DVDS.

9. TEST RESULTS:

A. REFERENCED SPECIFICATIONS

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE FOLLOWING, EXCEPT AS MODIFIED HEREIN OR ON THE PLANS:
   * STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION), BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION (IDOT SS) FOR ALL IMPROVEMENTS EXCEPT SANITARY SEWER AND WATER MAIN CONSTRUCTION;
   * STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS, LATEST EDITION (SSWS) FOR SANITARY SEWER AND WATER MAIN CONSTRUCTION;
   * VILLAGE OF PALATINE MUNICIPAL CODE;
   * THE METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO (MWRD) WATERSHED MANAGEMENT ORDINANCE AND TECHNICAL GUIDANCE MANUAL;
   * IN CASE OF CONFLICT BETWEEN THE APPLICABLE ORDINANCES NOTED, THE MORE STRINGENT SHALL TAKE PRECEDENCE AND SHALL CONTROL ALL CONSTRUCTION.

B. NOTIFICATIONS

1. THE MWRD LOCAL SEWER SYSTEMS SECTION FIELD OFFICE MUST BE NOTIFIED AT LEAST TWO (2) WORKING DAYS PRIOR TO THE COMMENCEMENT OF ANY WORK (CALL 708-588-4055).

2. THE VILLAGE OF PALATINE ENGINEERING DEPARTMENT AND PUBLIC MUST BE NOTIFIED AT LEAST 24 HOURS PRIOR TO THE START OF CONSTRUCTION AND PRIOR TO EACH PHASE OF WORK. CONTRACTOR SHALL DETERMINE ITEMS REQUIRING INSPECTION PRIOR TO START OF CONSTRUCTION OR EACH WORK PHASE.

3. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO BEGINNING CONSTRUCTION FOR THE EXACT LOCATIONS OF UTILITIES AND FOR THEIR PROTECTION DURING CONSTRUCTION. IF EXISTING UTILITIES ARE ENCOUNTERED THAT CONFLICT IN LOCATION WITH NEW CONSTRUCTION, IMMEDIATELY NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED. CALL J.U.L.I.E. AT 1-800-892-0123.

C. GENERAL NOTES

1. ALL ELEVATIONS SHOWN ON PLANS REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). CONVERSION FACTOR IS N/A FT.

2. MWRD, THE MUNICIPALITY AND THE OWNER OR OWNER'S REPRESENTATIVE SHALL HAVE THE AUTHORITY TO INSPECT, APPROVE, AND REJECT THE CONSTRUCTION IMPROVEMENTS.

3. THE CONTRACTOR(S) SHALL INDEMNIFY THE OWNER, ENGINEER, MUNICIPALITY, MWRD, AND THEIR AGENTS, ETC., FROM ALL LIABILITY INVOLVED WITH THE CONSTRUCTION, INSTALLATION, OR TESTING OF THIS WORK ON THE PROJECT.

4. THE PROPOSED IMPROVEMENTS MUST BE CONSTRUCTED IN ACCORDANCE WITH THE ENGINEERING PLANS AS APPROVED BY MWRD AND THE MUNICIPALITY UNLESS CHANGES ARE APPROVED BY MWRD, THE MUNICIPALITY, OR AUTHORIZED AGENT. THE CONSTRUCTION DETAILS, AS PRESENTED ON THE PLANS, MUST BE FOLLOWED. PROPER CONSTRUCTION TECHNIQUES MUST BE FOLLOWED ON THE IMPROVEMENTS INDICATED ON THE PLANS.

5. THE LOCATION OF VARIOUS UNDERGROUND UTILITIES WHICH ARE SHOWN ON THE PLANS ARE FOR INFORMATION ONLY AND REPRESENT THE BEST KNOWLEDGE OF THE ENGINEER. VERIFY LOCATIONS AND ELEVATIONS PRIOR TO BEGINNING THE CONSTRUCTION OPERATIONS.

6. ANY EXISTING PAVEMENT, SIDEWALK, DRIVEWAY, ETC., DAMAGED DURING CONSTRUCTION OPERATIONS AND NOT CALLED FOR TO BE REMOVED SHALL BE REPLACED AT THE EXPENSE OF THE CONTRACTOR.

7. MATERIAL AND COMPACTION TESTING SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE MUNICIPALITY, MWRD, AND OWNER.

8. THE UNDERGROUND CONTRACTOR SHALL MAKE ALL NECESSARY ARRANGEMENTS TO NOTIFY ALL INSPECTION AGENCIES.

9. ALL NEW AND EXISTING UTILITY STRUCTURES ON SITE AND IN AREAS DISTURBED DURING CONSTRUCTION SHALL BE ADJUSTED TO FINISH GRADE PRIOR TO FINAL INSPECTION.

10. RECORD DRAWINGS SHALL BE KEPT BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER AS SOON AS UNDERGROUND IMPROVEMENTS ARE COMPLETED. FINAL PAYMENTS TO THE CONTRACTOR SHALL BE HELD UNTIL THEY ARE RECEIVED. ANY CHANGES IN LENGTH, LOCATION OR ALIGNMENT SHALL BE SHOWN IN RED. ALL WYES OR BENDS SHALL BE LOCATED FROM THE DOWNSTREAM MANHOLE. ALL VALVES, B-BOXES, TEES OR BENDS SHALL BE TIED TO A FIRE HYDRANT.

D. SANITARY SEWER

1. THE CONTRACTOR SHALL TAKE MEASURES TO PREVENT ANY POLLUTED WATER, SUCH AS GROUND AND SURFACE WATER, FROM ENTERING THE EXISTING SANITARY SEWERS.

2. A WATER-TIGHT PLUG SHALL BE INSTALLED IN THE DOWNSTREAM SEWER PIPE AT THE POINT OF SEWER CONNECTION PRIOR TO COMMENCING ANY SEWER CONSTRUCTION. THE PLUG SHALL REMAIN IN PLACE UNTIL REMOVAL IS AUTHORIZED BY THE MUNICIPALITY AND/OR MWRD AFTER THE SEWERS HAVE BEEN TESTED AND ACCEPTED.

3. DISCHARGING ANY UNPOLLUTED WATER INTO THE SANITARY SEWER SYSTEM FOR THE PURPOSE OF SEWER FLUSHING OF LINES FOR THE DEFLECTION TEST SHALL BE PROHIBITED WITHOUT PRIOR APPROVAL FROM THE MUNICIPALITY OR MWRD.

4. ALL SANITARY SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS (LATEST EDITION).

5. ALL FLOOR DRAINS SHALL DISCHARGE TO THE SANITARY SEWER SYSTEM.

6. ALL DOWNSPOUTS AND FOOTING DRAINS SHALL DISCHARGE TO THE STORM SEWER SYSTEM.

7. ALL SANITARY SEWER PIPE MATERIALS AND JOINTS (AND STORM SEWER PIPE MATERIALS AND JOINTS IN A COMBINED SEWER AREA) SHALL CONFORM TO THE FOLLOWING:

| PIPE MATERIAL | PIPE SPECIFICATIONS | JOINT SPECIFICATIONS |
|---|---|---|
| VITRIFIED CLAY PIPE | ASTM C-700 | ASTM C-425 |
| REINFORCED CONCRETE SEWER PIPE | ASTM C-76 | ASTM C-443 |
| CAST IRON SOIL PIPE | ASTM A-74 | ASTM C-564 |
| DUCTILE IRON PIPE | ANSI A21.51 | ANSI A21.11 |
| POLYVINYL CHLORIDE (PVC) PIPE | | |
| 6-INCH TO 15-INCH DIAMETER SDR 26 | ASTM D-3034 | ASTM D-3212 |
| 18-INCH TO 27-INCH DIAMETER F/DY=46 | ASTM F-679 | ASTM D-3212 |
| HIGH DENSITY POLYETHYLENE (HDPE) | ASTM D-3350<br>ASTM D-3035 | ASTM D-3261,F-2620 (HEAT FUSION)<br>ASTM D-3212,F-477 (GASKETED) |
| WATER MAIN QUALITY PVC | | |
| 4-INCH TO 36-INCH | ASTM D-2241 | ASTM D-3139 |
| 4-INCH TO 12-INCH | AWWA C900 | ASTM D-3139 |
| 14-INCH TO 48-INCH | AWWA C905 | ASTM D-3139 |

THE FOLLOWING MATERIALS ARE ALLOWED ON A QUALIFIED BASIS SUBJECT TO DISTRICT REVIEW AND APPROVAL PRIOR TO PERMIT ISSUANCE. A SPECIAL CONDITION WILL BE ADDED TO THE PERMIT WHEN THE PIPE MATERIAL BELOW IS USED FOR SEWER CONSTRUCTION OR A CONNECTION IS MADE.

| PIPE MATERIAL | PIPE SPECIFICATIONS | JOINT SPECIFICATIONS |
|---|---|---|
| POLYPROPYLENE (PP) PIPE | | |
| 12-INCH TO 24-INCH DOUBLE WALL | ASTM F-2736 | D-3212, F-477 |
| 30-INCH TO 60-INCH TRIPLE WALL | ASTM F-2764 | D3212, F-477 |

8. ALL SANITARY SEWER CONSTRUCTION (AND STORM SEWER CONSTRUCTION IN COMBINED SEWER AREAS), REQUIRES STONE BEDDING WITH STONE ¼ " TO 1" IN SIZE, WITH MINIMUM BEDDING THICKNESS EQUAL TO ¼ THE OUTSIDE DIAMETER OF THE SEWER PIPE, BUT NOT LESS THAN FOUR (4) INCHES NOR MORE THAN EIGHT (8) INCHES. MATERIAL SHALL BE CA-7, CA-11 OR CA-13 AND SHALL BE EXTENDED AT LEAST 12" ABOVE THE TOP OF THE PIPE WHEN USING PVC.

9. NON-SHEAR FLEXIBLE-TYPE COUPLINGS SHALL BE USED IN THE CONNECTION OF SEWER PIPES OF DISSIMILAR PIPE MATERIALS.

10. ALL MANHOLES SHALL BE PROVIDED WITH BOLTED, WATERTIGHT COVERS. SANITARY LIDS SHALL BE CONSTRUCTED WITH A CONCEALED PICKHOLE AND WATERTIGHT GASKET WITH THE WORD "SANITARY" CAST INTO THE LID.

11. WHEN CONNECTING TO AN EXISTING SEWER MAIN BY MEANS OTHER THAN AN EXISTING WYE, TEE, OR AN EXISTING MANHOLE, ONE OF THE FOLLOWING METHODS SHALL BE USED:
    a) A CIRCULAR SAW-CUT OF SEWER MAIN BY PROPER TOOLS ("SHEWER-TAP" MACHINE OR SIMILAR) AND PROPER INSTALLATION OF HUBWYE SADDLE OR HUB-TEE SADDLE.
    b) REMOVE AN ENTIRE SECTION OF PIPE (BREAKING ONLY THE TOP OF ONE BELL) AND REPLACE WITH A WYE OR TEE BRANCH SECTION.
    c) WITH PIPE CUTTER, NEATLY AND ACCURATELY CUT OUT DESIRED LENGTH OF PIPE FOR INSERTION OF PROPER FITTING, USING "BAND SEAL" OR SIMILAR COUPLINGS TO HOLD IT FIRMLY IN PLACE.

12. WHENEVER A SANITARY/COMBINED SEWER CROSSES UNDER A WATERMAIN, THE MINIMUM VERTICAL DISTANCE FROM THE TOP OF THE SEWER TO THE BOTTOM OF THE WATERMAIN SHALL BE 18 INCHES. FURTHERMORE, A MINIMUM HORIZONTAL DISTANCE OF 10 FEET BETWEEN SANITARY/COMBINED SEWERS AND WATERMAINS SHALL BE MAINTAINED UNLESS: THE SEWER IS LAID IN A SEPARATE TRENCH, KEEPING A MINIMUM 18" VERTICAL SEPARATION; OR THE SEWER IS LAID IN THE SAME TRENCH WITH THE WATERMAIN LOCATED AT THE OPPOSITE SIDE ON A BENCH OF UNDISTURBED EARTH, KEEPING A MINIMUM 18" VERTICAL SEPARATION. IF EITHER THE VERTICAL OR HORIZONTAL DISTANCES DESCRIBED CANNOT BE MAINTAINED, OR THE SEWER CROSSES ABOVE THE WATER MAIN, THE SEWER SHALL BE CONSTRUCTED TO WATER MAIN STANDARDS OR IT SHALL BE ENCASED WITH A WATER MAIN QUALITY CARRIER PIPE WITH THE ENDS SEALED.

13. ALL EXISTING SEPTIC SYSTEMS SHALL BE ABANDONED. ABANDONED TANKS SHALL BE FILLED WITH GRANULAR MATERIAL OR REMOVED.

14. ALL SANITARY MANHOLES, (AND STORM MANHOLES IN COMBINED SEWER AREAS), SHALL HAVE A MINIMUM INSIDE DIAMETER OF 48 INCHES, AND SHALL BE CAST IN PLACE OR PRE-CAST REINFORCED CONCRETE.

15. ALL SANITARY MANHOLES, (AND STORM MANHOLES IN COMBINED SEWER AREAS), SHALL HAVE PRECAST "RUBBER BOOTS" THAT CONFORM TO ASTM C-923 FOR ALL PIPE CONNECTIONS. PRECAST SECTIONS SHALL CONSIST OF MODIFIED GROOVE TONGUE AND RUBBER GASKET TYPE JOINTS.

16. ALL ABANDONED SANITARY SEWERS SHALL BE PLUGGED AT BOTH ENDS WITH AT LEAST 2 FEET LONG NON-SHRINK CONCRETE OR MORTAR PLUG.

17. EXCEPT FOR FOUNDATION/FOOTING DRAINS PROVIDED TO PROTECT BUILDINGS, OR PERFORATED PIPES ASSOCIATED WITH VOLUME CONTROL FACILITIES, DRAIN TILES/FIELD TILES/UNDERDRAINS/PERFORATED PIPES ARE NOT ALLOWED TO BE CONNECTED TO OR TRIBUTARY TO COMBINED SEWERS, SANITARY SEWERS, OR STORM SEWERS TRIBUTARY TO COMBINED SEWERS IN COMBINED SEWER AREAS. CONSTRUCTION OF NEW FACILITIES OF THIS TYPE IS PROHIBITED; AND ALL EXISTING DRAIN TILES AND PERFORATED PIPES ENCOUNTERED WITHIN THE PROJECT AREA SHALL BE PLUGGED OR REMOVED, AND SHALL NOT BE CONNECTED TO COMBINED SEWERS, SANITARY SEWERS, OR STORM SEWERS TRIBUTARY TO COMBINED SEWERS.

18. A BACKFLOW PREVENTER IS REQUIRED FOR ALL DETENTION BASINS TRIBUTARY TO COMBINED SEWERS. REQUIRED BACKFLOW PREVENTERS SHALL BE INSPECTED AND EXERCISED ANNUALLY BY THE PROPERTY OWNER TO ENSURE PROPER OPERATION, AND ANY NECESSARY MAINTENANCES SHALL BE PERFORMED TO ENSURE FUNCTIONALITY. IN THE EVENT OF A SEWER SURCHARGE INTO AN OPEN DETENTION BASIN TRIBUTARY TO COMBINED SEWERS, THE PERMITTEE SHALL ENSURE THAT CLEAN UP AND WASH OUT OF SEWAGE TAKES PLACE WITHIN 48 HOURS OF THE STORM EVENT.

E. EROSION AND SEDIMENT CONTROL

1. THE CONTRACTOR SHALL INSTALL THE EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.

2. EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE FUNCTIONAL PRIOR TO HYDROLOGIC DISTURBANCE OF THE SITE.

3. ALL DESIGN CRITERIA, SPECIFICATIONS, AND INSTALLATION OF EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE IN ACCORDANCE WITH THE ILLINOIS URBAN MANUAL.

4. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.

5. INSPECTIONS AND DOCUMENTATION SHALL BE PERFORMED, AT A MINIMUM:
   a) UPON COMPLETION OF INITIAL EROSION AND SEDIMENT CONTROL MEASURES, PRIOR TO ANY SOIL DISTURBANCE.
   b) ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM EVENT WITH GREATER THAN 0.5 INCH OF RAINFALL OR LIQUID EQUIVALENT PRECIPITATION.

6. SOIL DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER AS TO MINIMIZE EROSION. IF STRIPPING, CLEARING, GRADING, OR LANDSCAPING ARE TO BE DONE IN PHASES, THE CO-PERMITTEE SHALL PLAN FOR APPROPRIATE SOIL EROSION AND SEDIMENT CONTROL MEASURES.

7. A STABILIZED MAT OF CRUSHED STONE MEETING THE STANDARDS OF THE ILLINOIS URBAN MANUAL SHALL BE INSTALLED AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE. SEDIMENT OR SOIL REACHING AN IMPROVED PUBLIC RIGHT-OF-WAY, STREET, ALLEY OR PARKING AREA SHALL BE REMOVED BY SCRAPING OR STREET CLEANING AS ACCUMULATIONS WARRANT AND TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA.

8. CONCRETE WASHOUT FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE ILLINOIS URBAN MANUAL AND SHALL BE INSTALLED PRIOR TO ANY ON SITE CONSTRUCTION ACTIVITIES INVOLVING CONCRETE.

9. MORTAR WASHOUT FACILITIES SHALL BE CONSTRUCTED IN ADDITION TO CONCRETE WASHOUT FACILITIES FOR ANY BRICK AND MORTAR BUILDING ENVELOPE CONSTRUCTION ACTIVITIES.

10. TEMPORARY DIVERSIONS SHALL BE CONSTRUCTED AS NECESSARY TO DIRECT ALL RUNOFF FROM HYDROLOGICALLY DISTURBED AREAS TO AN APPROPRIATE SEDIMENT TRAP OR BASIN. VOLUME CONTROL FACILITIES SHALL NOT BE USED AS TEMPORARY SEDIMENT BASINS.

12. DISTURBED AREAS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT MEASURES WITHIN SEVEN (7) DAYS.

13. ALL FLOOD PROTECTION AREAS AND VOLUME CONTROL FACILITIES SHALL, AT A MINIMUM, BE PROTECTED WITH A DOUBLE-ROW OF SILT FENCE (OR EQUIVALENT).

14. VOLUME CONTROL FACILITIES SHALL NOT BE CONSTRUCTED UNTIL ALL OF THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.

15. SOIL STOCKPILES SHALL, AT A MINIMUM, BE PROTECTED WITH PERIMETER SEDIMENT CONTROLS. SOIL STOCKPILES SHALL NOT BE PLACED IN FLOOD PROTECTION AREAS OR THEIR BUFFERS.

16. EARTHEN EMBANKMENT SIDE SLOPES SHALL BE STABILIZED WITH APPROPRIATE EROSION CONTROL BLANKET.

17. STORM SEWERS THAT ARE OR WILL BE FUNCTIONING DURING CONSTRUCTION SHALL BE PROTECTED BY APPROPRIATE SEDIMENT CONTROL MEASURES.

18. THE CONTRACTOR SHALL EITHER REMOVE OR REPLACE ANY EXISTING DRAIN TILES AND INCORPORATE THEM INTO THE DRAINAGE PLAN FOR THE DEVELOPMENT. DRAIN TILES CANNOT BE TRIBUTARY TO A SANITARY OR COMBINED SEWER. DRAIN TILES ALLOWED IN COMBINED SEWER AREA FOR GREEN INFRASTRUCTURE PRACTICES.

19. IF DEWATERING SERVICES ARE USED, ADJOINING PROPERTIES AND DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION. DEWATERING SYSTEMS SHOULD BE INSPECTED DAILY DURING OPERATIONAL PERIODS. THE SITE INSPECTOR MUST BE PRESENT AT THE COMMENCEMENT OF DEWATERING ACTIVITIES.

20. THE CONTRCTOR SHALL BE RESPONSIBLE FOR TRENCH DEWATERING AND EXCAVATION FOR THE INSTALLATION OF SANITARY SEWERS, STORM SEWERS, WATERMAINS AS WELL AS THEIR SERVICES AND OTHER APPURTENANCES. ANY TRENCH DEWATERING, WHICH CONTAINS SEDIMENT SHALL PASS THROUGH A SEDIMENT SETTLING POND OR EQUALLY EFFECTIVE SEDIMENT CONTROL DEVICE. ALTERNATIVES MAY INCLUDE DEWATERING INTO A SUMP PIT, FILTER BAG OR EXISTING VEGETATED UPSLOPE AREA. SEDIMENT LADEN WATERS SHALL NOT BE DISCHARGE TO WATERWAYS, FLOOD PROTECTION AREAS OR THE COMBINED SEWER SYSTEM.

21. ALL PERMANENT EROSION CONTROL PRACTICES SHALL BE INITIATED WITHIN SEVEN (7) DAYS FOLLOWING THE COMPLETION OF SOIL DISTURBING ACTIVITIES.

22. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED AND REPAIRED AS NEEDED ON A YEAR-ROUND BASIS DURING CONSTRUCTION AND ANY PERIODS OF CONSTRUCTION SHUTDOWN UNTIL PERMANENT STABILIZATION IS ACHIEVED.

23. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN THIRTY (30) DAYS AFTER PERMANENT SITE STABILIZATION.

24. THE EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THE PLANS ARE THE MINIMUM REQUIREMENTS. ADDITIONAL MEASURES MAY BE REQUIRED, AS DIRECTED BY THE ENGINEER, SITE INSPECTOR, OR MWRD.

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TECHNICAL GUIDANCE MANUAL

07/12/2016

MWRD GENERAL NOTES

STD. DWG. NO.18

PAGE NO. 19

| NO. | DATE | REMARKS |
|---|---|---|
| 1 | 02/21/24 | REVISIONS PER ARCHITECT AND STORMTRAP |

SPECIFICATIONS - 2

OREST EXPRESS
NEW TRUCK TERMINAL
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

SPACECO INC.

FILENAME: 11624.03SPEC2

DATE: 02/16/24

JOB NO. 11624.03

SHEET SP2

15 OF 24

Attachment: Final Engineering Plans (2240 - 2266 N. Rand Road - FPD Distribution Use)

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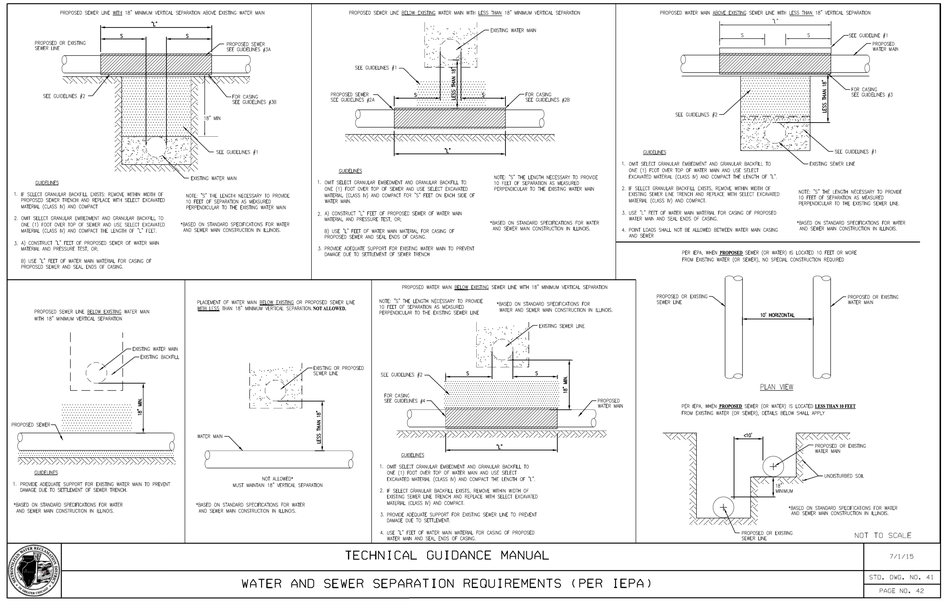
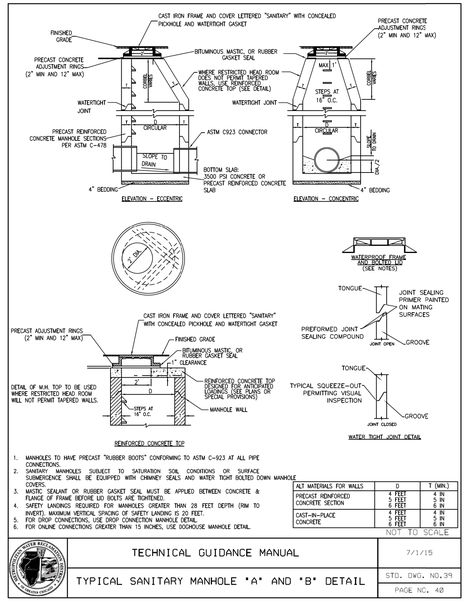



TECHNICAL GUIDANCE MANUAL — 7/1/15

WATER AND SEWER SEPARATION REQUIREMENTS (PER IEPA) — STD. DWG. NO. 41 — PAGE NO. 42



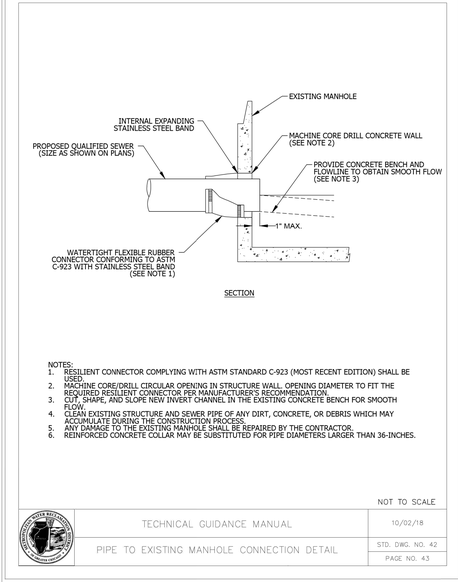

1. MANHOLES TO HAVE PRECAST "RUBBER BOOTS" CONFORMING TO ASTM C-923 AT ALL PIPE CONNECTIONS.
2. SANITARY MANHOLES SUBJECT TO SATURATION SOIL CONDITIONS OR SURFACE SUBMERGENCE SHALL BE EQUIPPED WITH CHIMNEY SEALS AND WATER TIGHT BOLTED DOWN MANHOLE COVERS.
3. MASTIC SEALANT OR RUBBER GASKET SEAL MUST BE APPLIED BETWEEN CONCRETE & FLANGE OF FRAME BEFORE LID BOLTS ARE TIGHTENED.
4. SAFETY LANDINGS REQUIRED FOR MANHOLES GREATER THAN 28 FEET DEPTH (RIM TO INVERT). MAXIMUM VERTICAL SPACING OF SAFETY LANDING IS 20 FEET.
5. FOR DROP CONNECTIONS, USE DROP CONNECTION MANHOLE DETAIL.
6. FOR ONLINE CONNECTIONS GREATER THAN 15 INCHES, USE DOGHOUSE MANHOLE DETAIL.

| ALT MATERIALS FOR WALLS | D | T (MIN.) |
|---|---|---|
| PRECAST REINFORCED CONCRETE SECTION | 4 FEET | 4 IN |
| | 5 FEET | 5 IN |
| | 6 FEET | 6 IN |
| CAST-IN-PLACE CONCRETE | 4 FEET | 4 IN |
| | 5 FEET | 5 IN |
| | 6 FEET | 6 IN |

NOT TO SCALE

TECHNICAL GUIDANCE MANUAL — 7/1/15

TYPICAL SANITARY MANHOLE 'A' AND 'B' DETAIL — STD. DWG. NO.39 — PAGE NO. 40



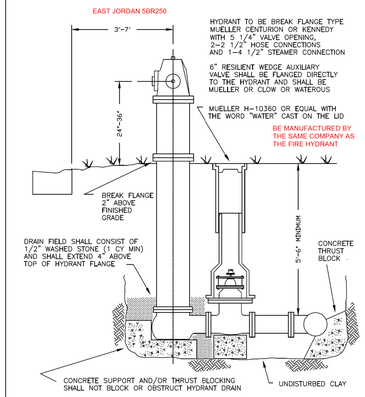

NOTES:
1. RESILIENT CONNECTOR COMPLYING WITH ASTM STANDARD C-923 (MOST RECENT EDITION) SHALL BE USED.
2. MACHINE CORE/DRILL CIRCULAR OPENING IN STRUCTURE WALL, OPENING DIAMETER TO FIT THE REQUIRED RESILIENT CONNECTOR PER MANUFACTURER'S RECOMMENDATION.
3. CLEAN, SHAPE, AND SLOPE NEW INVERT CHANNEL IN THE EXISTING CONCRETE BENCH FOR SMOOTH FLOW.
4. CLEAN EXISTING STRUCTURE AND SEWER PIPE OF ANY DIRT, CONCRETE, OR DEBRIS WHICH MAY ACCUMULATE DURING THE CONSTRUCTION PROCESS.
5. ANY DAMAGE TO THE EXISTING MANHOLE SHALL BE REPAIRED BY THE CONTRACTOR.
6. REINFORCED CONCRETE COLLAR MAY BE SUBSTITUTED FOR PIPE DIAMETERS LARGER THAN 36-INCHES.

NOT TO SCALE

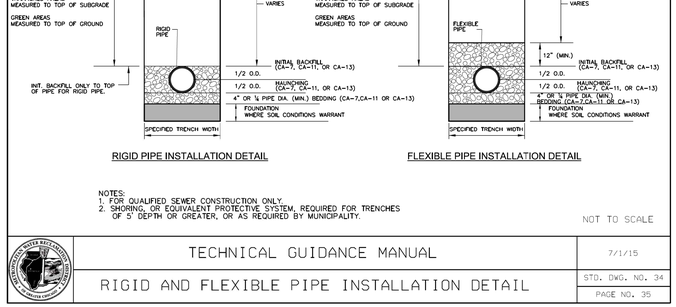
TECHNICAL GUIDANCE MANUAL — 10/02/18

PIPE TO EXISTING MANHOLE CONNECTION DETAIL — STD. DWG. NO. 42 — PAGE NO. 43

# FIRE HYDRANT




| NO. | DATE | REMARKS |
|---|---|---|
| 1 | 02/21/24 | REVISIONS PER ARCHITECT AND STORMTRAP |



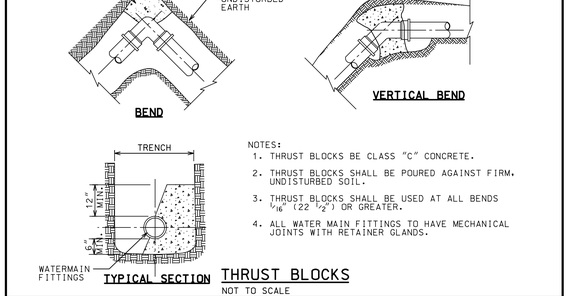

RIGID PIPE INSTALLATION DETAIL — FLEXIBLE PIPE INSTALLATION DETAIL

NOTES:
1. FOR QUALIFIED SEWER CONSTRUCTION ONLY.
2. SHORING, OR EQUIVALENT PROTECTIVE SYSTEM, REQUIRED FOR TRENCHES OF 5' DEPTH OR GREATER, OR AS REQUIRED BY MUNICIPALITY.

NOT TO SCALE

TECHNICAL GUIDANCE MANUAL — 7/1/15

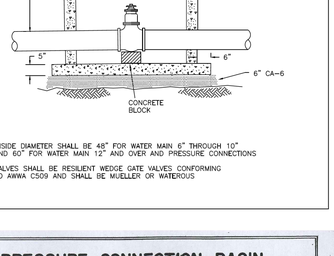
RIGID AND FLEXIBLE PIPE INSTALLATION DETAIL — STD. DWG. NO. 34 — PAGE NO. 35




NOTES:
1. THRUST BLOCKS BE CLASS "C" CONCRETE.
2. THRUST BLOCKS SHALL BE POURED AGAINST FIRM, UNDISTURBED SOIL.
3. THRUST BLOCKS SHALL BE USED AT ALL BENDS 1/16" (22 1/2°) OR GREATER.
4. ALL WATER MAIN FITTINGS TO HAVE MECHANICAL JOINTS WITH RETAINER GLANDS.

THRUST BLOCKS
NOT TO SCALE

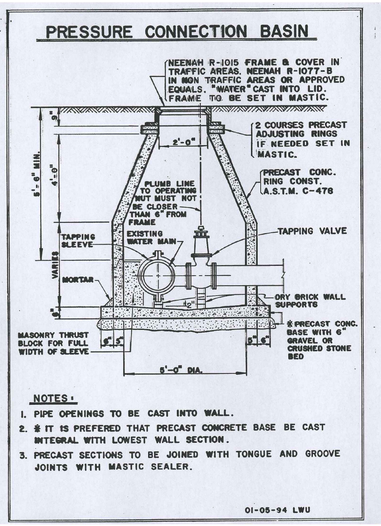
# WATER VALVE VAULT




INSIDE DIAMETER SHALL BE 48" FOR WATER MAIN 6" THROUGH 10" AND 60" FOR WATER MAIN 12" AND OVER AND PRESSURE CONNECTIONS

VALVES SHALL BE RESILIENT WEDGE GATE VALVES CONFORMING TO AWWA C509 AND SHALL BE MUELLER OR WATEROUS

# PRESSURE CONNECTION BASIN




NOTES:
1. PIPE OPENINGS TO BE CAST INTO WALL.
2. IF IT IS PREFERED THAT PRECAST CONCRETE BASE BE CAST INTEGRAL WITH LOWEST WALL SECTION.
3. PRECAST SECTIONS TO BE JOINED WITH TONGUE AND GROOVE JOINTS WITH MASTIC SEALER.

01-05-94 LWU

| NO. | DATE | REMARKS |
|---|---|---|

DETAILS - 1

OREST EXPRESS
NEW TRUCK TERMINAL
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

SPACECO INC.

FILENAME: 11624.03DET01

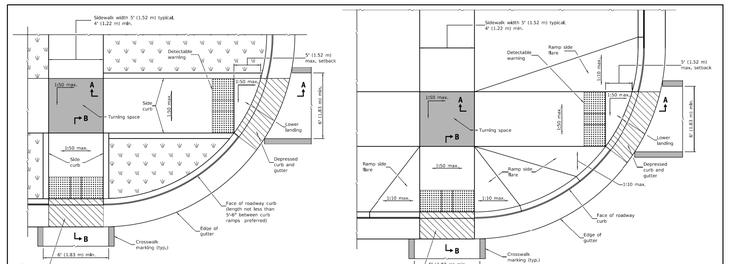
DATE: 02/16/24

JOB NO. 11624.03

SHEET D1

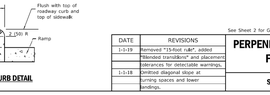
16 OF 24

Attachment: Final Engineering Plans (2240 - 2266 N. Rand Road - FPD Distribution Use)




**RAMPS IN LANDSCAPED AREA SETBACK ≤ 5'**

**RAMPS IN PAVED AREA SETBACK ≤ 5'**




**SECTION A-A**

② The running slope of a curb ramp shall be 1:20 min. and 1:12 max. The running slope of a blended transition shall be 1:20 max.




**SECTION B-B**

② The running slope of a curb ramp shall be 1:20 min. and 1:12 max. The running slope of a blended transition shall be 1:20 max.

**DETAIL A**

**SIDE CURB DETAIL**

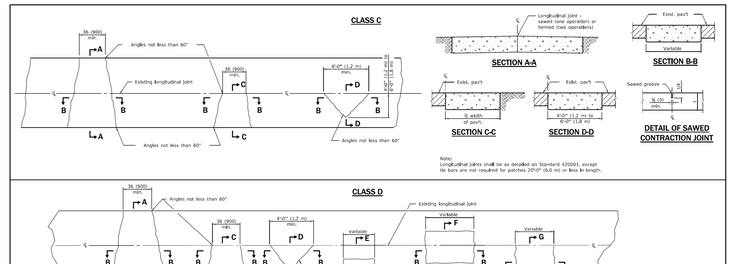
See Sheet 2 for GENERAL NOTES.

| DATE | REVISIONS |
|---|---|
| 1-1-19 | Removed "(Tikhot rib)", added "Blended transitions" and placement tolerances for detectable warnings, |
| 1-1-18 | Omitted diagonal slope at turning spaces and lower landings. |

**PERPENDICULAR CURB RAMPS FOR SIDEWALKS**

(Sheet 1 of 2)

**STANDARD 424001-11**




Note:
Longitudinal joints shall be as detailed on Standard 420001, except tie bars are not required for patches 20'-0" (6.0 m) or less in length.

**GENERAL NOTES**

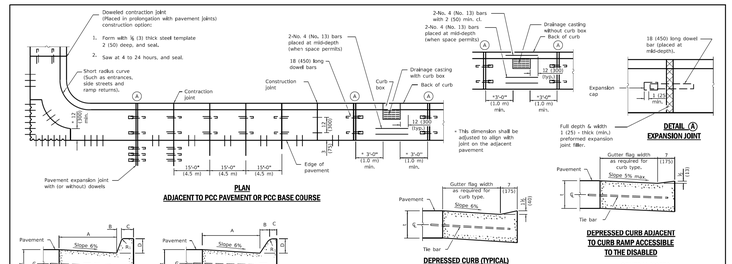
Existing tie bars shall be either cut or removed. Marginal bars shall be cut.

All dimensions are in inches (millimeters) unless otherwise shown.

| DATE | REVISIONS |
|---|---|
| 1-1-08 | Switched units to English (metric). |
| 1-1-07 | Revised Note for Class C patches. |

**CLASS C and D PATCHES**

**STANDARD 442201-03**




**PLAN**
**ADJACENT TO PCC PAVEMENT OR PCC BASE COURSE**

**DETAIL Ⓐ EXPANSION JOINT**

**BARRIER CURB**

| TABLE OF DIMENSIONS BARRIER CURB | | | | | | |
|---|---|---|---|---|---|---|
| TYPE | A | B | C | D | $R_1$ | $R_2$ |
| B-6.06 (B-15.15) [B-6.12] | 6 (150) | 6 (150) | 6 (150) | 6 (150) | 24 (600) | 12 (300) |
| B-6.24 (B-15.60) [B-6.24] | 24 (600) | 6 (150) | 6 (150) | 6 (150) | 24 (600) | 12 (300) |
| B-6.36 (B-15.45) [B-6.36] | 36 (900) | 6 (150) | 6 (150) | 6 (150) | 24 (600) | 12 (300) |
| B-6.48 (B-15.60) [B-6.48] | 48 (1200) | 6 (150) | 6 (150) | 6 (150) | 24 (600) | 12 (300) |
| B-12.30 (B-30.75) [B-12.30] | 30 (750) | 12 (300) | 12 (300) | 12 (300) | 24 (600) | 12 (300) |
| B-12.48 (B-30.120) [B-12.48] | 48 (1200) | 12 (300) | 12 (300) | 12 (300) | 24 (600) | 12 (300) |
| B-24.24 (B-60.60) [B-24.24] | 24 (600) | 24 (600) | 24 (600) | 24 (600) | 24 (600) | 12 (300) |

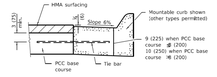
* For corner islands only.

**MOUNTABLE CURB**

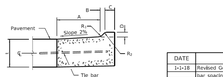
| TABLE OF DIMENSIONS MOUNTABLE CURB | | | | | | |
|---|---|---|---|---|---|---|
| TYPE | A | B | C | D | $R_1$ | $R_2$ |
| M-2.06 (M-5.15) [M-2.12] (M-5.30) | 6 (150) | 12 (300) | 6 (150) | 6 (150) | 3 (75) | 3 (75) |
| M-2.12 (M-5.30) [M-2.12] (M-5.30) | 6 (150) | 12 (300) | 6 (150) | 6 (150) | 3 (75) | 3 (75) |
| M-2.24 (M-5.45) [M-2.24] (M-5.60) | 6 (150) | 12 (300) | 6 (150) | 6 (150) | 3 (75) | 3 (75) |
| M-2.36 (M-5.60) [M-2.36] (M-5.90) | 6 (150) | 12 (300) | 6 (150) | 6 (150) | 3 (75) | 3 (75) |
| M-2.48 (M-5.90) [M-2.48] (M-6.00) | 6 (150) | 12 (300) | 6 (150) | 6 (150) | 3 (75) | 3 (75) |
| M-6.06 (M-15.15) [M-6.12] (M-15.30) | 6 (150) | 12 (300) | 6 (150) | 6 (150) | 3 (75) | 3 (75) |
| M-6.12 (M-15.30) [M-6.12] (M-15.30) | 6 (150) | 12 (300) | 6 (150) | 6 (150) | 3 (75) | 3 (75) |
| M-6.24 (M-15.45) [M-6.24] (M-15.60) | 6 (150) | 12 (300) | 6 (150) | 6 (150) | 3 (75) | 3 (75) |
| M-6.36 (M-15.60) [M-6.36] (M-15.90) | 6 (150) | 12 (300) | 6 (150) | 6 (150) | 3 (75) | 3 (75) |
| M-6.48 (M-15.60) [M-6.48] (M-15.90) | 6 (150) | 12 (300) | 6 (150) | 6 (150) | 3 (75) | 3 (75) |

**BARRIER CURB** **MOUNTABLE CURB**

**DEPRESSED CURB (TYPICAL)**




**ADJACENT TO PCC BASE COURSE WITH HMA SURFACING**




**M-2.06 (M-5.15) and M-2.12 (M-5.30)**

**DEPRESSED CURB ADJACENT TO CURB RAMP ACCESIBLE TO THE DISABLED**

**GENERAL NOTES**

The bottom slope of combination curb and gutter constructed adjacent to pcc pavement shall be the same slope as the subbase or 6% when subbase is omitted.

t = Thickness of pavement.

Longitudinal joint tie bars shall be No. 6 (No. 19) at 36 (900) centers in accordance with details for longitudinal contraction joint shown on Standard 420001.

A minimum clearance of 2 (50) between the end of the tie bar and the back of the curb shall be maintained.

The dowel bars shown in contraction joints will only be required for monolithic construction.

See Standard 606301 for details of corner islands.

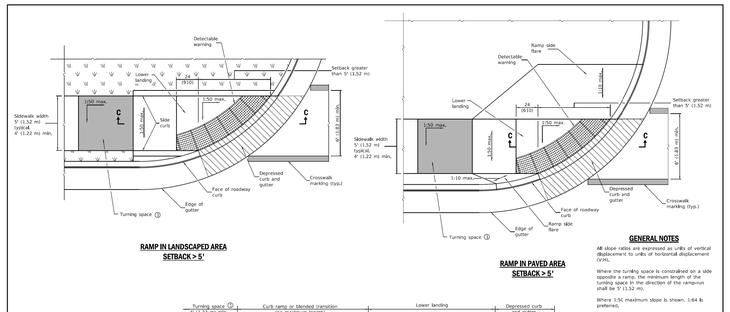
All dimensions are in inches (millimeters) unless otherwise shown.

| DATE | REVISIONS |
|---|---|
| 1-1-18 | Revised General Note for tie bar spacing to 36 (900) ctrs. |
| 1-1-15 | Added B-6.06 (B-15.15) barrier curb and gutter to table (corner islands only). |

**CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER**

(Sheet 1 of 2)

**STANDARD 606001-07**




**RAMP IN LANDSCAPED AREA SETBACK > 5'**

**RAMP IN PAVED AREA SETBACK > 5'**

**SECTION C-C**

① This turning space not required for blended transitions.

② The running slope of a curb ramp shall be 1:20 min. and 1:12 max. The running slope of a blended transition shall be 1:20 max.

**GENERAL NOTES**

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

Where the turning space is constrained on a side opposite a ramp, the minimum length of the turning space in the direction of the ramp-run shall be 5' (1.52 m).

Where 1:50 maximum slope is shown, 1:64 is preferred.

Detectable warnings are shown in their ideal locations but the following placement tolerances are allowed.

Side Border - Detectable warnings should extend the full width of the walking surface (excluding curb) and be 2 (600) min. in length. Each side up to 2 in. (50 mm) in width is allowed.

Curb Setback - Detectable warnings located at the back of curb should closely align with the curb and be up to 6 in. (150 mm) behind the curb to allow for.

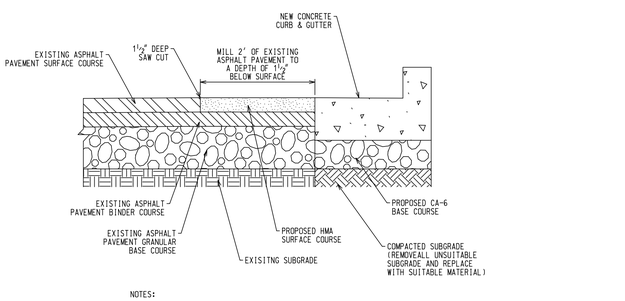
See Standard 606001 for details of depressed curb adjacent to curb ramp.

All dimensions are in inches (millimeters) unless otherwise shown.

**PERPENDICULAR CURB RAMPS FOR SIDEWALKS**

(Sheet 2 of 2)

**STANDARD 424001-11**



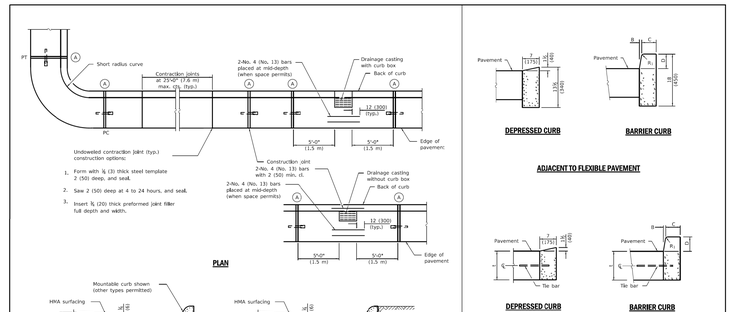

NOTES:

1. EXISTING PAVEMENT SECTION IS SHOWN FOR REFERENCE ONLY.
2. ALL ASPHALT PAVEMENT MILLINGS SHALL BE DISPOSED OF BY THE CONTRACTOR.
3. BITUMINOUS TACK COAT SHALL BE APPLIED AT A RATE OF 0.1 GALLONS PER SQUARE YARD TO BOTH EXISTING AND PROPOSED ASPHALT BINDER COURSE PRIOR TO NEW HMA SURFACE COURSE INSTALLATION.

**PAVEMENT PATCHING**

**AT CURB & GUTTER REMOVAL**

NOT TO SCALE



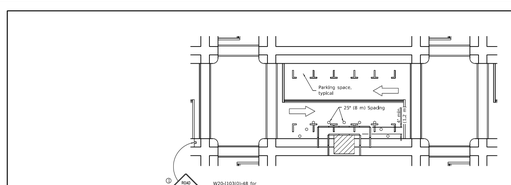

**PLAN**




**CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER**

(Sheet 2 of 2)

**STANDARD 606001-07**




| DATE | REVISIONS |
|---|---|
| 4-1-16 | Omitted orange safety fence from standard as this is covered in the std. spec. |
| 1-1-13 | Added SIDEWALK DIVERSION. Modified appearance of ribbon views. Renamed Std. |

**SIDEWALK, CORNER OR CROSSWALK CLOSURE**

(Sheet 1 of 2)

**STANDARD 701801-06**

Omit whenever duplicated by road work traffic control.

**GENERAL NOTES**

This Standard is used where, at any time, pedestrian traffic must be rerouted due to work being performed.

This Standard must be used in conjunction with other Traffic Control Protection Standards when roadway traffic is affected.

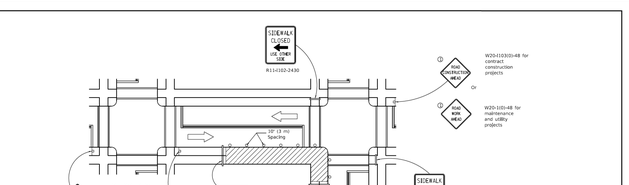
Temporary facilities shall be detectable and accessible,

The temporary pedestrian facilities shall be provided on the same side of the closed facilities whenever possible.

The SIDEWALK CLOSED / USE OTHER SIDE sign shall be placed at the nearest crosswalk or intersection on the side of the closure. Where the closure occurs at a corner, the signs shall be erected on the corners across the street from the closure. The SIDEWALK CLOSED signs shall be used at the ends of the actual closures.

Type III barricades and R11-2-R430 signs shall be positioned as shown in "ROAD CLOSED TO ALL TRAFFIC" detail on Standard 701901.

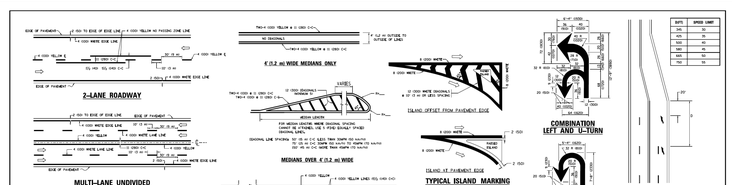
All dimensions are in inches (millimeters) unless otherwise shown.




**SIDEWALK, CORNER OR CROSSWALK CLOSURE**

(Sheet 2 of 2)

**STANDARD 701801-06**




| TYPE OF MARKING | WIDTH OF LINE | PATTERN | COLOR | SPACING / REMARKS |
|---|---|---|---|---|
| CENTERLINE ON 2 LANE PAVEMENT | 4 (100) | SKIP-DASH | YELLOW | 10' (3 m) LINE AND 30' (9 m) SPACE |
| CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT | 4 & 4 (100) | SOLID | YELLOW | 0 (0) C-C |
| TWO-WAY LEFT TURN LANE OR ONE DIRECTION LANE | 4 (100) & 4 (100) | SOLID | YELLOW & WHITE | TO TWO 4 (100) NON-PARALLEL DIVERGING LINES AT 2' (600) C-C |
| LANE LINES | 4 (100) | SKIP-DASH | WHITE | 10' (3 m) LINE AND 30' (9 m) SPACE |
| QUAD LINES (CONSISTING OF SEVEN, LINE 10 FOOT LINE MARKER) | LINE 4 (100) SPACE 4 (100) | SKIP-DASH | YELLOW & LINE BEING | 2' (600) LINE WITH 6' (1.8 m) SPACE |
| EDGE LINES | 4 (100) | SOLID | YELLOW/LEFT SIDE/RIGHT | OUTLINE MEDIANS IN YELLOW |
| TURN LANE MARKING | 6 (150) LINE FULL WIDTH OF TURN | SOLID | WHITE | SEE TYPICAL TURN LANE MARKING DETAIL |
| TWO WAY LEFT TURN MARKING | 4 & 4 (100) SPACE BETWEEN LINES | SKIP-DASH ON LEFT | YELLOW | 10' (3 m) LINE AND 30' (9 m) SPACE FOR TWO WAY LEFT TURN LANE BETWEEN SOLID EDGE LINES. ONE SOLID, PROVIDES LEFT TURN LANE ON LEFT SIDE |
| CROSSWALK LINES (RESTRICTED TO USE AT SIGNALIZED INTERSECTIONS & CONTROLLED TURN POINTS) | 2 & 6 (50 & 150) OR 4 (100) & 6 (150) | SOLID | WHITE | NO LESS THAN 6' (1.8 m) APART (C-C) OF LINES |
| STOP LINES | 24 (600) | SOLID | WHITE | 24 (600) WIDE ACROSS APPROACH APPROACH, EXTENDING BEYOND OUTSIDE EDGE OF TURN LANE |
| PAINTED MEDIANS | 2 & 2 (600) WIDE & SKIP DASHING & 4 (100) WIDE DIVIDING LINES FOR MEDIANS OVER 4' (1.2 m) WIDE | SOLID | YELLOW, TRAFFIC FLOW SIDE & WHITE, ONE WAY TRAFFIC | 2' (600) WIDE FOR ONE DIRECTION LANE, 4' (1.2 m) WIDE FOR TWO DIRECTIONAL TRAFFIC WITH DIVIDING LINE |
| CURB MARKING (NO PARKING ANY TIME) | 6 (150) WITH 12' (3.6 m) SPACE | SOLID | WHITE | TO CONSIST OF 6" (150) MIN. WIDE STRIPE ON TOP OF CURB AND 12" (300) MIN. WIDE STRIPE ON FACE OF CURB |
| NO PARKING (FIRE LANE) | 6 (150) | SOLID | WHITE | SAME AS ABOVE EXCEPT 6" (150) MIN. WIDE STRIPE ON FACE OF CURB |
| PARKING SPACE | 4 (100) | SOLID | WHITE | 18' (5.4 m) LONG WHEN PARKING IS PARALLEL TO CURB |
| HANDICAP PARKING | 4 (100) | SOLID | BLUE | 18' (5.4 m) LONG WHEN PARKING IS PARALLEL TO CURB |
| CROSSWALK | 24 (600) | SOLID | WHITE | 6 (150) WIDE, 6' (1.8 m) APART |
| CROSSWALK DIAGONALS REQUIRED FOR UNSIGNALIZED 3' & 4' | 12 (300) | SOLID | WHITE | 6 (150) WIDE, 6' (1.8 m) APART |
| X TURN ARROW | SEE DETAIL | SOLID | WHITE | 'ALL' 'X' |
| X ARROW COMBINATION | SEE DETAIL | SOLID | WHITE | 'ALL' 'X' |

FOR ADDITIONAL DETAILS ON PAVEMENT MARKING REFER TO STANDARD 780001 FOR TYPICAL PAVEMENT MARKINGS AND STATE HIGHWAY MANUAL.

All dimensions are in inches (millimeters) unless otherwise shown.

| FILE NAME = | USER NAME = jhayes | DESIGNED - EVEN | REVISED - 1) JULY21 10:00AM |
|---|---|---|---|
| N:\Projects\11624\11624.03\ENG\ | PLOT SCALE = 10.0000 ' / in. | CHECKED - | REVISED - 2) JULY21 10:01AM |
| Default | PLOT DATE = 8/20/2021 | DATE = 10-24-90 | REVISED - 3) JULY21 04:12PM |

**STATE OF ILLINOIS**
**DEPARTMENT OF TRANSPORTATION**

| DISTRICT ONE | SECTION | COUNTY | TOTAL SHEETS | NO. |
|---|---|---|---|---|
| TYPICAL PAVEMENT MARKINGS | 10-1-13 | | CONTRACT NO. | |
| TYPICAL NONE | SHEET 1 OF 1 SHEETS STA. | TO STA. | ILLINOIS FED. AID PROJ. | |

| NO. | DATE | REMARKS |
|---|---|---|
| 1 | 02/21/24 | REVISIONS PER ARCHITECT AND STORMTRAP |

**DETAILS - 2**

**OREST EXPRESS**
**NEW TRUCK TERMI**
**PALATINE, ILLINOIS**

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

SPACECO INC.

FILENAME: 11624.03DET02

DATE: 02/16/24

JOB NO. 11624.03

SHEET **D2**

17 OF 24

Attachment: Final Engineering Plans (2240 - 2266 N. Rand Road - FPD Distribution Use)

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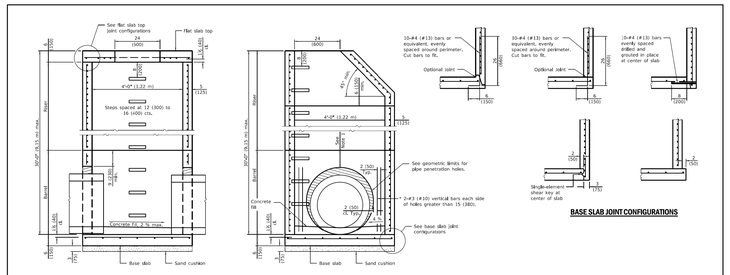
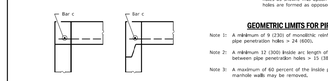



**SECTION PARALLEL TO PIPE**
(Without conical top riser)

**SECTION PERPENDICULAR TO PIPE**
(With conical top riser)

**BASE SLAB JOINT CONFIGURATIONS**




**FLAT SLAB TOP JOINT CONFIGURATIONS**
(Shown at access hole)

**GEOMETRIC LIMITS FOR PIPE PENETRATION HOLES**

Note 1: A minimum of 9 (230) of monolithic reinforced concrete shall be maintained above pipe penetration holes > 24 (600).

Note 2: A minimum 12 (300) inside arc length of reinforced concrete shall be maintained between pipe penetration holes > 15 (380).

Note 3: A maximum of 60 percent of the inside perimeter of the reinforced concrete manhole walls may be removed.

Note 4: Horizontal joints that intersect pipe penetration holes > 15 (380) shall have one joint splice for every location around the perimeter of the joint where the inside arc length between pipe penetration holes is < 24 (600). See joint splice detail.

Note 5: The recommended pipe penetration hole is equal to the O.D. of the pipe plus 4 (100).

Note 6: Only pipe penetration holes ≤ 15 (380) are allowed in riser sections.

**SHEAR KEY GEOMETRY**
(Reinforcement not shown for clarity)

**GENERAL NOTES**

The manufacturer shall ensure that all precast manhole sections are additionally reinforced where required to resist damage from handling, shipping and installation stresses.

Lifting holes shall be located in the sections as per the manufacturer's recommendations.

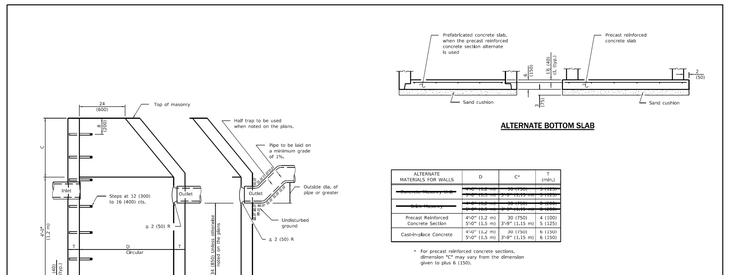
See Standard 602701 for details of manhole steps.

All dimensions are in inches (millimeters) unless otherwise noted.

| DATE | REVISIONS |
|---|---|
| 1-2-21 | Revised Note 1 and lifting hole general note. |
| 3-1-19 | Moved wall reinforcement from inside face to middle. |

**PRECAST MANHOLE TYPE A**
**4' (1.22 m) DIAMETER**
(Sheet 2 of 2)

**STANDARD 602401-07**




**ELEVATION**
(Standard Outlet)

**ELEVATION**
(Half Trap)

**ALTERNATE BOTTOM SLAB**

| ALTERNATE MATERIALS FOR WALLS | D | Cr | T (min.) |
|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] |
| Precast Reinforced Concrete Section | 4'-0" (1.2 m) 5'-0" (1.5 m) | 30 (762) 36 (914) | 4 (100) 5 (125) |
| Cast-in-place Concrete | 4'-0" (1.2 m) 5'-0" (1.5 m) | 30 (762) 36 (914) | 5 (125) 6 (150) |

* For precast reinforced concrete sections, dimension "C" may vary from the dimension given to plus 6 (150).

**GENERAL NOTES**

Bottom slabs shall be reinforced with a minimum of 0.35 sq. in./ft (420 sq. mm/m) in both directions with a maximum spacing of 12 (300).

Bottom slabs may be connected to the riser as determined by the fabricator; however, only a single row of reinforcement around the perimeter may be utilized.

See Standard 602001 for optional precast reinforced concrete flat slab top.

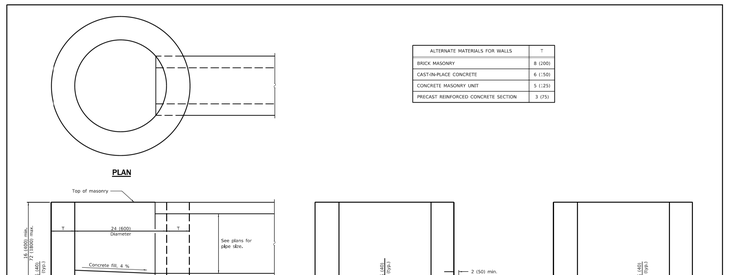
See Standard 602701 for details of steps.

All dimensions are in inches (millimeters) unless otherwise shown.

| DATE | REVISIONS |
|---|---|
| 3-1-11 | Added "Outside" to half trap note, Detail redn. in slabs. |
| 1-1-09 | Revised general notes. |
| | Switched units to English (metric). |

**CATCH BASIN**
**TYPE A**

**STANDARD 602001-02**




| ALTERNATE MATERIALS FOR WALLS | T |
|---|---|
| BRICK MASONRY | 8 (200) |
| CAST-IN-PLACE CONCRETE | 6 (150) |
| CONCRETE MASONRY UNIT | 5 (125) |
| PRECAST REINFORCED CONCRETE SECTION | 3 (75) |

**PLAN**

**ELEVATION**

**ALTERNATE METHODS**

**GENERAL NOTES**

Bottom slabs shall be reinforced with a minimum of 0.24 sq. in./ft. (510 sq. mm/m) in both directions with a maximum spacing of 10 (250).

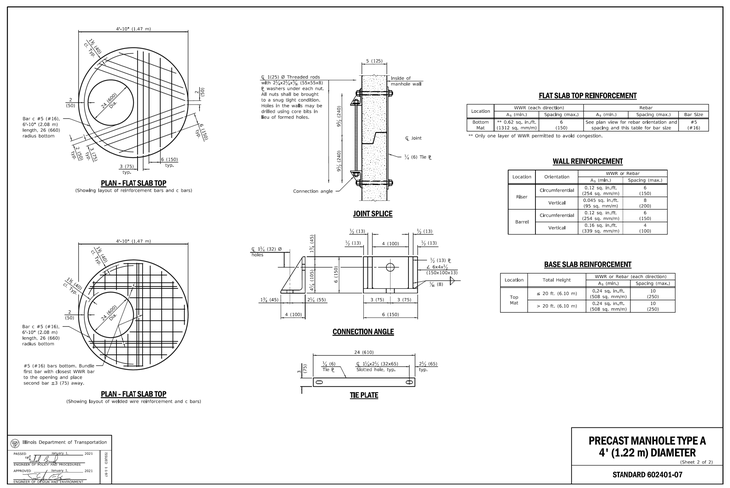
Bottom slabs may be connected to the riser as determined by the fabricator; however, only a single row of reinforcement around the perimeter may be utilized.

All dimensions are in inches (millimeters) unless otherwise shown.

| DATE | REVISIONS |
|---|---|
| 1-1-14 | Increased height to 72 (1800) maximum. |
| 1-1-13 | Detailed redn. in slabs. |
| | Added max. limit to height. |
| | Added general notes. |

**INLET - TYPE A**

**STANDARD 602301-04**




**PLAN - FLAT SLAB TOP**
(Showing layout of reinforcement bars and c bars)

**JOINT SPLICE**

**CONNECTION ANGLE**

**TIE PLATE**

**FLAT SLAB TOP REINFORCEMENT**

| Location | WWR (each direction) | | Rebar | |
|---|---|---|---|---|
| | $A_s$ (min.) | Spacing (max.) | $A_s$ (min.) | Spacing (max.) |
| Bottom Mat | ** 0.82 sq. in./ft. (1312 sq. mm/m) | 6 (150) | See plan view for rebar orientation and spacing and this table for bar size | |

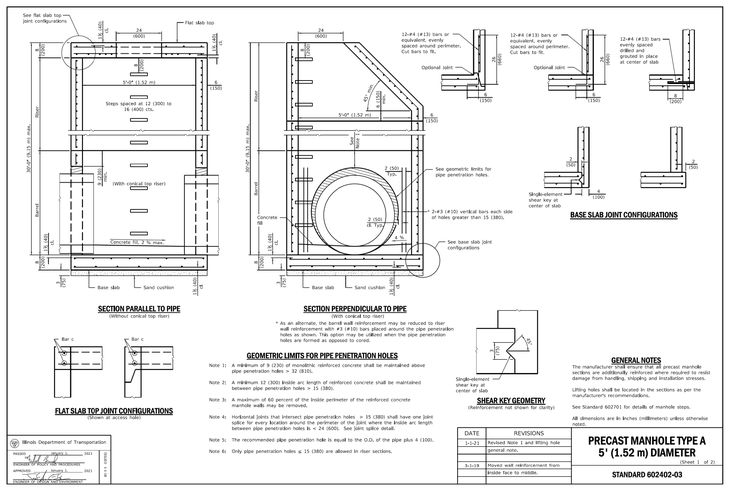
** Only one layer of WWR permitted to avoid congestion.

**WALL REINFORCEMENT**

| Location | Orientation | WWR or Rebar | |
|---|---|---|---|
| | | $A_s$ (min.) | Spacing (max.) |
| Riser | Circumferential | 0.12 sq. in./ft. (254 sq. mm/m) | 6 (150) |
| | Vertical | 0.045 sq. in./ft. (95 sq. mm/m) | 8 (200) |
| Barrel | Circumferential | 0.12 sq. in./ft. (254 sq. mm/m) | 6 (150) |
| | Vertical | 0.16 sq. in./ft. (339 sq. mm/m) | 6 (150) |

**BASE SLAB REINFORCEMENT**

| Location | Total Height | WWR or Rebar (each direction) |
|---|---|---|
| | | $A_s$ (min.) | Spacing (max.) |
| Top Mat | ≤ 20 ft. (6.10 m) | 0.24 sq. in./ft. (508 sq. mm/m) | 10 (250) |
| | > 20 ft. (6.10 m) | 0.24 sq. in./ft. (508 sq. mm/m) | 10 (250) |




**SECTION PARALLEL TO PIPE**
(Without conical top riser)

**SECTION PERPENDICULAR TO PIPE**
(With conical top riser)

**BASE SLAB JOINT CONFIGURATIONS**




**FLAT SLAB TOP JOINT CONFIGURATIONS**
(Shown at access hole)

**GEOMETRIC LIMITS FOR PIPE PENETRATION HOLES**

Note 1: A minimum of 9 (230) of monolithic reinforced concrete shall be maintained above pipe penetration holes > 32 (810).

Note 2: A minimum 12 (300) inside arc length of reinforced concrete shall be maintained between pipe penetration holes > 15 (380).

Note 3: A maximum of 60 percent of the inside perimeter of the reinforced concrete manhole walls may be removed.

Note 4: Horizontal joints that intersect pipe penetration holes > 15 (380) shall have one joint splice for every location around the perimeter of the joint where the inside arc length between pipe penetration holes is < 24 (600). See joint splice detail.

Note 5: The recommended pipe penetration hole is equal to the O.D. of the pipe plus 4 (100).

Note 6: Only pipe penetration holes ≤ 15 (380) are allowed in riser sections.




**SHEAR KEY GEOMETRY**
(Reinforcement not shown for clarity)

**GENERAL NOTES**

The manufacturer shall ensure that all precast manhole sections are additionally reinforced where required to resist damage from handling, shipping and installation stresses.

Lifting holes shall be located in the sections as per the manufacturer's recommendations.

See Standard 602701 for details of manhole steps.

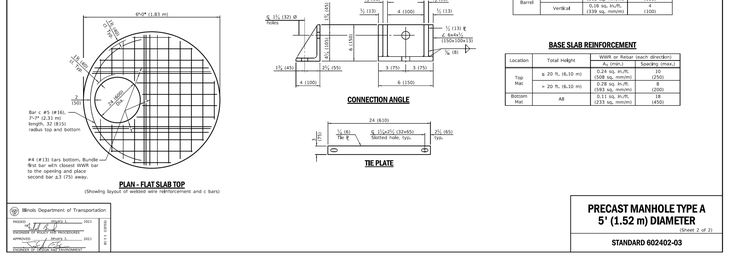
All dimensions are in inches (millimeters) unless otherwise noted.

| DATE | REVISIONS |
|---|---|
| 1-2-21 | Revised Note 1 and lifting hole general note. |
| 3-1-19 | Moved wall reinforcement from inside face to middle. |

**PRECAST MANHOLE TYPE A**
**5' (1.52 m) DIAMETER**
(Sheet 1 of 2)

**STANDARD 602402-03**




**PLAN - FLAT SLAB TOP**
(Showing layout of bottom reinforcement bars and c bars)

**JOINT SPLICE**

**CONNECTION ANGLE**

**TIE PLATE**

**FLAT SLAB TOP REINFORCEMENT**

| Location | WWR (each direction) | | Rebar (each direction except as noted) | |
|---|---|---|---|---|
| | $A_s$ (min.) | Spacing (max.) | $A_s$ (min.) | Spacing (max.) | Bar Size |
| Top Mat | 0.51 sq. in./ft. (233 sq. mm/m) | 18 (450) | 0.51 sq. in./ft. (233 sq. mm/m) | 18 (450) | #3 or #4 (#10) (#13) |
| Bottom Mat | ** 0.62 sq. in./ft. (1312 sq. mm/m) | 6 (150) | See plan view for rebar orientation and spacing and this table for bar size | | #5 (#16) |
| | ** 0.88 sq. in./ft. (1863 sq. mm/m) | 6 (150) | | | #6 (#19) |

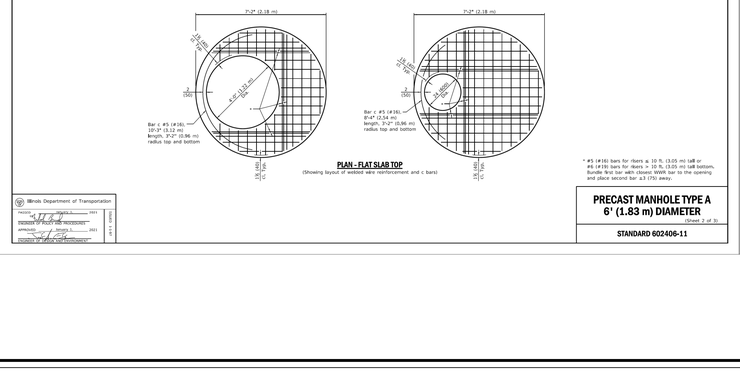
** Only one layer of WWR permitted to avoid congestion.

**WALL REINFORCEMENT**

| Location | Orientation | WWR or Rebar | |
|---|---|---|---|
| | | $A_s$ (min.) | Spacing (max.) |
| 4 ft. (1.22 m) Ø Riser | Circumferential | 0.12 sq. in./ft. (254 sq. mm/m) | 6 (150) |
| | Vertical | 0.045 sq. in./ft. (95 sq. mm/m) | 8 (200) |
| 6 ft. (1.83 m) Ø Barrel | Circumferential | 0.18 sq. in./ft. (381 sq. mm/m) | 6 (150) |
| | Vertical | 0.045 sq. in./ft. (95 sq. mm/m) | 6 (150) |

**BASE SLAB REINFORCEMENT**

| Location | Riser Height (RH)/ Total Height (TH) | WWR or Rebar (each direction) | |
|---|---|---|---|
| | | $A_s$ (min.) | Spacing (max.) |
| Top Mat | RH ≤ 10 ft. (3.05 m) & TH ≤ 20 ft. (6.10 m) | 0.20 sq. in./ft. (593 sq. mm/m) | 6 (150) |
| | RH > 10 ft. (3.05 m) or TH > 20 ft. (6.10 m) | 0.31 sq. in./ft. (847 sq. mm/m) | 6 (150) |
| Bottom Mat | All | 0.11 sq. in./ft. (233 sq. mm/m) | 18 (450) |




**PLAN - FLAT SLAB TOP**
(Showing layout of bottom reinforcement bars and c bars)

* #5 (#16) bars for risers ≤ 10 ft. (3.05 m) tall or #6 (#19) bars for risers > 10 ft. (3.05 m) tall bottom, Bundle first bar with closed WWR bar to the opening and place second bar ≥3 (75) away.

**PRECAST MANHOLE TYPE A**
**6' (1.83 m) DIAMETER**
(Sheet 2 of 3)

**STANDARD 602406-11**







**SECTION PARALLEL TO PIPE**
(Without conical top riser)

**SECTION PERPENDICULAR TO PIPE**
(With conical top riser)

**BASE SLAB JOINT CONFIGURATIONS**




**FLAT SLAB TOP JOINT CONFIGURATIONS**
(Shown at access hole)

**GEOMETRIC LIMITS FOR PIPE PENETRATION HOLES**

Note 1: A minimum of 9 (230) of monolithic reinforced concrete shall be maintained above pipe penetration holes > 32 (810).

Note 2: A minimum 12 (300) inside arc length of reinforced concrete shall be maintained between pipe penetration holes > 15 (380).

Note 3: A maximum of 60 percent of the inside perimeter of the reinforced concrete manhole walls may be removed.

Note 4: Horizontal joints that intersect pipe penetration holes > 15 (380) shall have one joint splice for every location around the perimeter of the joint where the inside arc length between pipe penetration holes is < 24 (600). See joint splice detail.

Note 5: The recommended pipe penetration hole is equal to the O.D. of the pipe plus 4 (100).

Note 6: Only pipe penetration holes ≤ 15 (380) are allowed in riser sections.




**SHEAR KEY GEOMETRY**
(Reinforcement not shown for clarity)

**GENERAL NOTES**

Pipe holes shall be formed to facilitate proper placement of hole reinforcement.

The manufacturer shall ensure that all precast manhole sections are additionally reinforced where required to resist damage from handling, shipping and installation stresses.

Lifting holes shall be located in the sections as per the manufacturer's recommendations.

See Standard 602701 for details of manhole steps.

All dimensions are in inches (millimeters) unless otherwise noted.

| DATE | REVISIONS |
|---|---|
| 1-1-21 | Revised Note 1, Note 2 and lifting hole general note. |
| 3-1-19 | Moved wall reinforcement from inside face to middle. |

**PRECAST MANHOLE TYPE A**
**6' (1.83 m) DIAMETER**
(Sheet 1 of 3)

**STANDARD 602406-11**







**PLAN - FLAT SLAB TOP**
(Showing layout of bottom reinforcement bars and c bars)

* #5 (#16) bars for risers ≤ 10 ft. (3.05 m) tall or #6 (#19) bars for risers > 10 ft. (3.05 m) tall bottom, Bundle first bar with closed WWR bar to the opening and place second bar ≥3 (75) away.

**PRECAST MANHOLE TYPE A**
**6' (1.83 m) DIAMETER**
(Sheet 2 of 3)

**STANDARD 602406-11**







**PLAN - FLAT SLAB TOP**
(Showing layout of bottom reinforcement bars and c bars)

**JOINT SPLICE**

**CONNECTION ANGLE**

**TIE PLATE**

**FLAT SLAB TOP REINFORCEMENT**

| Location | Riser Height (RH) | WWR (each direction except as noted) | | Rebar (each direction except as noted) | |
|---|---|---|---|---|---|
| | | $A_s$ (min.) | Spacing (max.) | $A_s$ (min.) | Spacing (max.) | Bar Size |
| Top Mat | All | 0.51 sq. in./ft. (233 sq. mm/m) | 18 (450) | 0.51 sq. in./ft. (233 sq. mm/m) | 18 (450) | #3 or #4 (#10) (#13) |
| Bottom Mat | RH ≤ 10 ft. (3.05 m) | ** 0.62 sq. in./ft. (1312 sq. mm/m) | 6 (150) | See plan view for rebar orientation and spacing and this table for bar size | | #5 (#16) |
| | RH > 10 ft. (3.05 m) | ** 0.88 sq. in./ft. (1863 sq. mm/m) | 6 (150) | | | #6 (#19) |

** Only one layer of WWR permitted to avoid congestion.

**WALL REINFORCEMENT**

| Location | Orientation | WWR or Rebar | |
|---|---|---|---|
| | | $A_s$ (min.) | Spacing (max.) |
| 4 ft. (1.22 m) Ø Riser | Circumferential | 0.12 sq. in./ft. (254 sq. mm/m) | 6 (150) |
| | Vertical | 0.045 sq. in./ft. (95 sq. mm/m) | 8 (200) |
| 6 ft. (1.83 m) Ø Barrel | Circumferential | 0.18 sq. in./ft. (381 sq. mm/m) | 6 (150) |
| | Vertical | 0.045 sq. in./ft. (95 sq. mm/m) | 6 (150) |

**BASE SLAB REINFORCEMENT**

| Location | Riser Height (RH)/ Total Height (TH) | WWR or Rebar (each direction) | |
|---|---|---|---|
| | | $A_s$ (min.) | Spacing (max.) |
| Top Mat | RH ≤ 10 ft. (3.05 m) & TH ≤ 20 ft. (6.10 m) | 0.20 sq. in./ft. (593 sq. mm/m) | 6 (150) |
| | RH > 10 ft. (3.05 m) or TH > 20 ft. (6.10 m) | 0.31 sq. in./ft. (847 sq. mm/m) | 6 (150) |
| Bottom Mat | All | 0.11 sq. in./ft. (233 sq. mm/m) | 18 (450) |




**PLAN - FLAT SLAB TOP**
(Showing layout of bottom reinforcement bars and c bars)

* #5 (#16) bars for risers ≤ 10 ft. (3.05 m) tall or #6 (#19) bars for risers > 10 ft. (3.05 m) tall bottom, Bundle first bar with closed WWR bar to the opening and place second bar ≥3 (75) away.

**PRECAST MANHOLE TYPE A**
**6' (1.83 m) DIAMETER**
(Sheet 3 of 3)

**STANDARD 602406-11**




| NO. | DATE | REMARKS |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

| NO. | DATE | REMARKS |
|---|---|---|
| 1 | 02/21/24 | REVISIONS PER ARCHITECT AND STORMTRAP |

**DETAILS - 3**

**OREST EXPRESS**
**NEW TRUCK TERMINAL**
**PALATINE, ILLINOIS**

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065
SPACECO INC.

FILENAME: 11624.03DET03

DATE: 02/16/24

JOB NO. 11624.03

SHEET **D3**
18 OF 24

Attachment: Final Engineering Plans (2240 - 2266 N. Rand Road - FPD Distribution Use)

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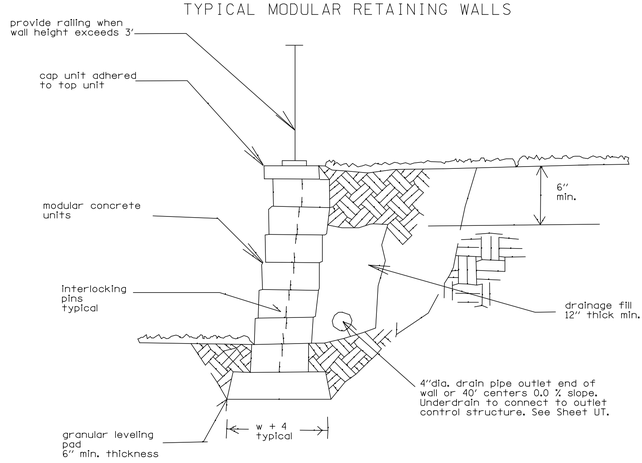
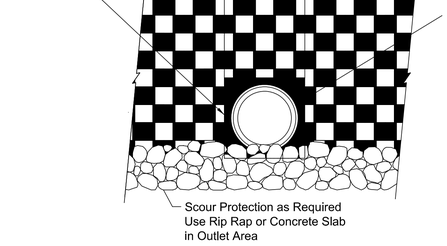
# TYPICAL MODULAR RETAINING WALLS



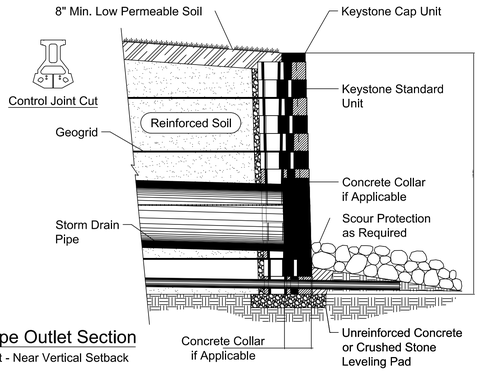

Notes:

1. All modular retaining walls are to be contructed per the manufacturers specifications.
2. The examples shown are to highlight typical components to be used in the design of walls. The contractor shall submit shop drawings of the proposed retaining walls for review and approval prior to installation.
3. Contractor shall submit structural calculations and plans prepared and sealed by a structural engineer for all retaining walls prior to construction.

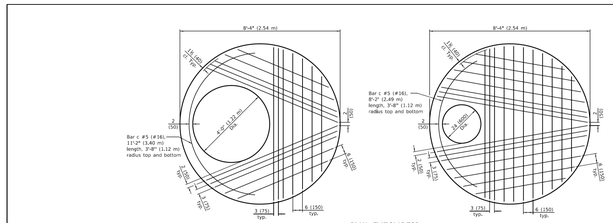



Note:
For pipes larger than 24", a concrete collar may be cast around pipe for ease of construction and appearance.

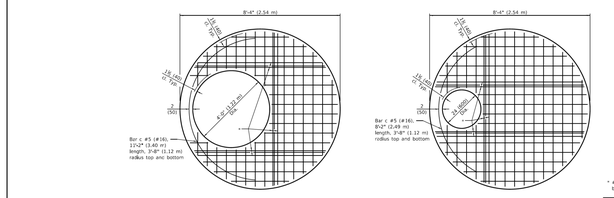
## Typical Pipe Outlet Detail




Typical Pipe Outlet Section
Standard Unit - Near Vertical Setback




PLAN - FLAT SLAB TOP
(Showing layout of bottom reinforcement Bars and c bars)

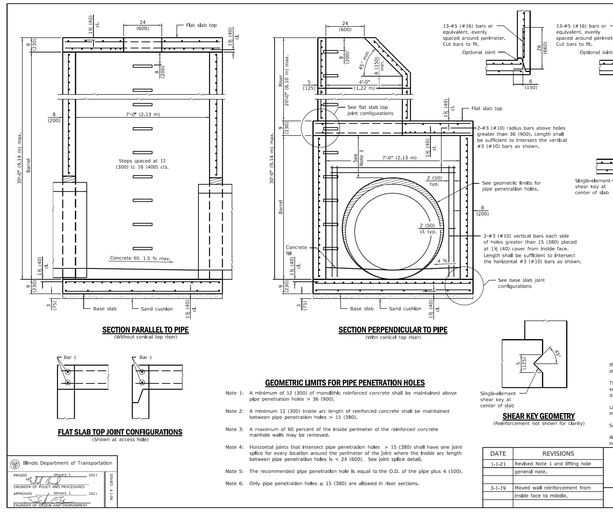



PLAN - FLAT SLAB TOP
(Showing layout of Welded Wire Reinforcement and c bars)
WWR not permitted for riser heights > 10' (3.05 m).

* #5 (#16) bars bottom. Bundle first bar with closest WWR bar to the opening and place second bar ±3 (75) away.

Illinois Department of Transportation
PASSED Effective 1-1-2021
ENGINEER OF POLICY AND PROCEDURES
APPROVED Effective 1-1-2021
ENGINEER OF BRIDGES AND STRUCTURES
BC 2 sheets

**PRECAST MANHOLE TYPE A**
**7' (2.13 m) DIAMETER**
(Sheet 2 of 3)
**STANDARD 602411-09**




SECTION PARALLEL TO PIPE
(Without conical top riser)

SECTION PEPPENDICULAR TO PIPE
(With conical top riser)

BASE SLAB JOINT CONFIGURATIONS

FLAT SLAB TOP JOINT CONFIGURATIONS
(Shown at access hole)

**GEOMETRIC LIMITS FOR PIPE PENETRATION HOLES**

Note 1: A minimum of 12 (300) of monolithic reinforced concrete shall be maintained above pipe penetration holes > 36 (900).

Note 2: A minimum 12 (300) inside arc length of reinforced concrete shall be maintained between pipe penetration holes > 15 (380).

Note 3: A maximum of 60 percent of the inside perimeter of the reinforced concrete manhole walls may be removed.

Note 4: Horizontal joints that intersect pipe penetration holes > 15 (380) shall have one joint splice for every location around the perimeter of the joint where the inside arc length between pipe penetration holes is < 24 (600). See joint splice detail.

Note 5: The recommended pipe penetration hole is equal to the O.D. of the pipe plus 4 (100).

Note 6: Only pipe penetration holes ≤ 15 (380) are allowed in riser sections.




**SHEAR KEY GEOMETRY**
(Reinforcement not shown for Clarity)

**GENERAL NOTES**

Pipe holes shall be formed to facilitate proper placement of hole reinforcement.

The manufacturer shall ensure that all precast manhole sections are additionally reinforced where required to resist damage from handling, shipping and installation stresses.

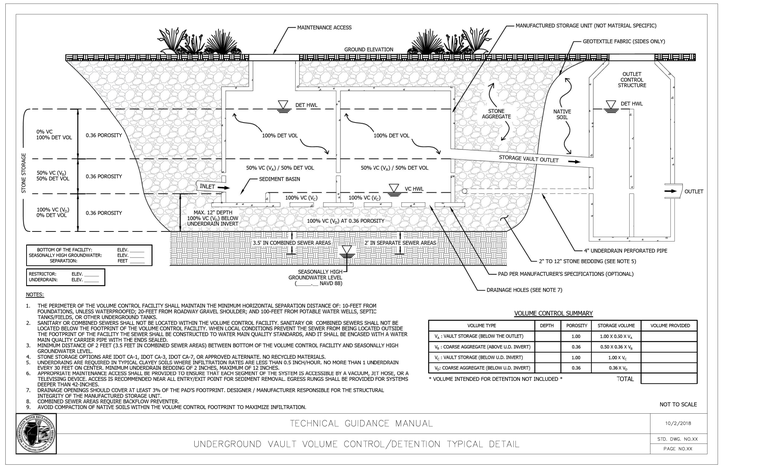
Lifting holes shall be located in the sections as per the manufacturer's recommendations.

See Standard 602701 for details of manhole steps.

All dimensions are in inches (millimeters) unless otherwise noted.

| DATE | REVISIONS |
|---|---|
| 1-1-21 | Revised Note 1 and lifting hole general note. |
| 1-1-19 | Moved wall reinforcement from inside face to middle. |

**PRECAST MANHOLE TYPE A**
**7' (2.13 m) DIAMETER**
(Sheet 1 of 3)
**STANDARD 602411-09**



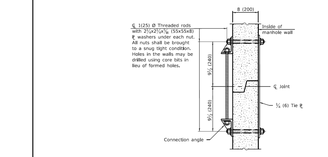

NOTES:
1. THE PERIMETER OF THE VOLUME CONTROL FACILITY SHALL MAINTAIN THE MINIMUM HORIZONTAL SEPARATION DISTANCE OF: 10-FEET FROM FOUNDATIONS, UNLESS WATERPROOFED; 20-FEET FROM ROADWAY GRAVEL SHOULDER; AND 100-FEET FROM POTABLE WATER WELLS, SEPTIC TANK/FIELDS, OR OTHER UNDERGROUND TANKS.
2. SANITARY OR COMBINED SEWERS SHALL NOT BE LOCATED WITHIN THE VOLUME CONTROL FACILITY. SANITARY OR COMBINED SEWERS SHALL NOT BE LOCATED BELOW THE FOOTPRINT OF THE VOLUME CONTROL FACILITY. WHEN LOCAL CONDITIONS PREVENT THE SEWER FROM BEING LOCATED OUTSIDE THE FOOTPRINT OF THE VOLUME CONTROL FACILITY, THE SEWER SHALL BE CONSTRUCTED TO WATER MAIN QUALITY STANDARDS, AND IT SHALL BE ENCASED WITH A WATER MAIN QUALITY CARRIER PIPE WITH THE SAME SEALED.
3. MINIMUM DISTANCE OF 2 FEET (3.5 FEET IN COMBINED SEWER AREAS) BETWEEN BOTTOM OF THE VOLUME CONTROL FACILITY AND SEASONALLY HIGH GROUNDWATER LEVEL.
4. STONE STORAGE OPTIONS ARE IDOT CA-1, IDOT CA-3, IDOT CA-7, OR APPROVED ALTERNATE. NO RECYCLED MATERIALS.
5. STONE STORAGE SHALL BE ENCLOSED IN TYPICAL CLOTH™ SOILS WHERE INFILTRATION RATES ARE LESS THAN 0.5 INCH/HOUR. NO MORE THAN 1 UNDERDRAIN LAYER: 20 FEET ON CENTER, MINIMUM UNDERDRAIN BEDDING OF 2 INCHES, MAXIMUM OF 12 INCHES.
6. APPROPRIATE MAINTENANCE ACCESS SHALL BE PROVIDED TO ENSURE THAT EACH SEGMENT OF THE SYSTEM IS ACCESSIBLE BY A VACUUM, JET HOSE, OR A TELEVISING DEVICE. ACCESS IS RECOMMENDED NEAR ALL ENTRY/EXIT POINT FOR SEDIMENT REMOVAL. EGRESS RUNGS SHALL BE PROVIDED FOR SYSTEMS DEEPER THAN 4'0 INCHES.
7. DRAINAGE HOLES OPTIONAL. SHALL COVER AT LEAST 3% OF THE PAD'S FOOTPRINT. DESIGNER / MANUFACTURER RESPONSIBLE FOR THE STRUCTURAL INTEGRITY OF THE MANUFACTURED STORAGE UNIT.
8. COMBINED SEWER AREAS REQUIRE BACKFLOW PREVENTER.
9. AVOID COMPACTION OF NATIVE SOILS WITHIN THE VOLUME CONTROL FOOTPRINT TO MAXIMIZE INFILTRATION.

VOLUME CONTROL SUMMARY

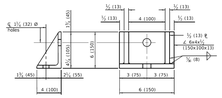
| VOLUME TYPE | DEPTH | POROSITY | STORAGE VOLUME | VOLUME PROVIDED |
|---|---|---|---|---|
| $V_u$ / VAULT STORAGE (BELOW THE OUTLET) | | 1.00 | 1.00 X 0.50 X $V_u$ | |
| $V_s$ / COARSE AGGREGATE (ABOVE U.D. INVERT) | | 0.36 | 0.36 X 0.36 X $V_s$ | |
| $V_u$ / VAULT STORAGE (BELOW U.D. INVERT) | | 1.00 | 1.00 X $V_u$ | |
| $V_{ST}$ COARSE AGGREGATE (BELOW U.D. INVERT) | | 0.36 | 0.36 X $V_{ST}$ | |
| * VOLUME INTENDED FOR DETENTION NOT INCLUDED * | | | TOTAL | |

NOT TO SCALE

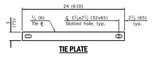
TECHNICAL GUIDANCE MANUAL — 10/2/2018
UNDERGROUND VAULT VOLUME CONTROL/DETENTION TYPICAL DETAIL — STD. DWG. NO.XX — PAGE NO.XX




JOINT SPLICE




CONNECTION ANGLE




TIE PLATE

**FLAT SLAB TOP REINFORCEMENT**

| Location | Riser Height (RH) | WWR (each direction) | | Rebar (each direction except as noted) | | |
|---|---|---|---|---|---|---|
| | | $A_s$ (min.) | Spacing (max.) | $A_s$ (min.) | Spacing (max.) | Bar Size |
| Top Mat | All | 0.11 sq. in./ft. (233 sq. mm/m) | 18 (450) | 0.11 sq. in./ft. (233 sq. mm/m) | 18 (450) | #3 or #4 (#10 or #13) |
| Bottom Mat | RH ≤ 10 ft. (3.05 m) | ** 0.62 sq. in./ft. (310 sq. mm/m) | 6 (150) | See plan view for rebar orientation and spacing and this table for bar size | | #5 (#16) |
| | RH > 10 ft. (3.05 m) | WWR not permitted | | | | #7 (#22) |

** Only one layer of WWR permitted to avoid congestion.

**WALL REINFORCEMENT**

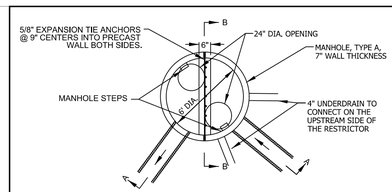
| Location | Orientation | WWR or Rebar | |
|---|---|---|---|
| | | $A_s$ (min.) | Spacing (max.) |
| 4 ft. (1.22 m) Ø Riser | Circumferential | 0.12 sq. in./ft. (254 sq. mm/m) | 6 (150) |
| | Vertical | 0.045 sq. in./ft. (95 sq. mm/m) | 9 (200) |
| 7 ft. (2.13 m) Ø Barrel | Circumferential | 0.21 sq. in./ft. (445 sq. mm/m) | 6 (150) |
| | Vertical | 0.045 sq. in./ft. (95 sq. mm/m) | 9 (200) |

**BASE SLAB REINFORCEMENT**

| Location | Riser Height (RH) / Total Height (TH) | WWR or Rebar (each direction) | |
|---|---|---|---|
| | | $A_s$ (min.) | Spacing (max.) |
| Top Mat | RH ≤ 10 ft. (3.05 m) & TH ≤ 20 ft. (6.10 m) | 0.32 sq. in./ft. (677 sq. mm/m) | 6 (150) |
| | RH > 10 ft. (3.05 m) or TH > 20 ft. (6.10 m) | 0.52 sq. in./ft. (1101 sq. mm/m) | 6 (150) |
| Bottom Mat | All | 0.11 sq. in./ft. (233 sq. mm/m) | 18 (450) |

Illinois Department of Transportation
PASSED Effective 1-1-2021
ENGINEER OF POLICY AND PROCEDURES
APPROVED Effective 1-1-2021
ENGINEER OF BRIDGES AND STRUCTURES
BC 2 sheets

**PRECAST MANHOLE TYPE A**
**7' (2.13 m) DIAMETER**
(Sheet 3 of 3)
**STANDARD 602411-09**



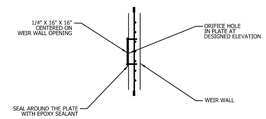
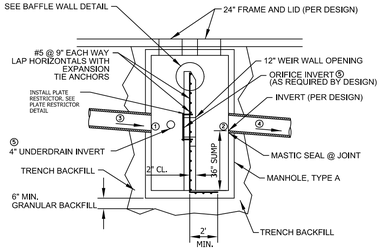




PLATE RESTRICTOR DETAIL: SECTION




SECTION A-A FOR OCS-1

| | ⑥ | OCS 1 |
|---|---|---|
| UPSTREAM INVERT | ① | 49.33 |
| DOWNSTREAM INVERT | ② | 49.33 |
| UPSTREAM PIPE DIAMETER | ③ | 12" |
| DOWNSTREAM PIPE DIAMETER | ④ | 12" |
| ORIFICE (⑤ & 4" UNDERDRAIN INVERT | ⑤ | 49.33 |

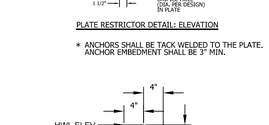
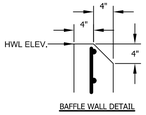
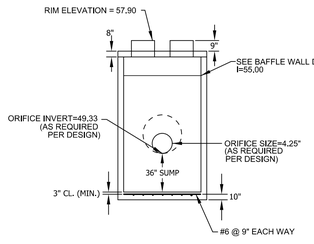



PLATE RESTRICTOR DETAIL: ELEVATION

* ANCHORS SHALL BE TACK WELDED TO THE PLATE. ANCHOR EMBEDMENT SHALL BE 3" MIN.




BAFFLE WALL DETAIL




SECTION B-B FOR OCS-1

NOTES:
1. WATERTIGHT CONNECTIONS REQUIRED BETWEEN STRUCTURE AND PIPES CONFORMING TO ASTM C-923
2. STRUCTURE AND BAFFLE WALL FABRICATED USING PORTLAND CEMENT CONCRETE.
3. RESTRICTORS LESS THAN 4" IN DIAMETER MUST USE CITY OF CHICAGO VORTEX RESTRICTOR (SEE DETAIL)
4. BAFFLE WALL PERMANENTLY INSTALLED AS PRECAST OR CAST IN PLACE, (STEEL PLATE ACCEPTABLE IF PERMANENT).
5. PIPE TO STRUCTURE CONNECTIONS SHALL BE ASTM C923 IN COMBINED SEWER AREAS.
6. THIS DETAIL WAS REVISED BY SPACECO
7. UNDERDRAINS SHALL CONNECT INTO OCS STRUCTURE UPSTREAM OF RESTRICTOR

NOT TO SCALE

| TECHNICAL GUIDANCE MANUAL | 7/1/15 |
|---|---|
| TYPICAL OUTLET CONTROL STRUCTURE (WALL) DETAIL | STD. DWG. NO.25 |
| | PAGE NO. 26 |

| NO. | DATE | REMARKS |
|---|---|---|
| 1 | 02/21/24 | REVISIONS PER ARCHITECT AND STORMTRAP |

DETAILS - 4

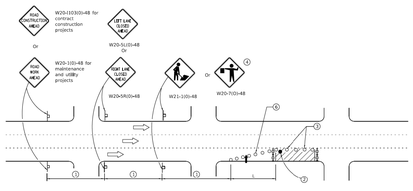
OREST EXPRESS
NEW TRUCK TERMINAL
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

SPACECO INC.

FILENAME: 11624.03DET04
DATE: 02/16/24
JOB NO. 11624.03
SHEET D4
19 OF 24

Attachment: Final Engineering Plans (2240 - 2266 N. Rand Road - FPD Distribution Use)




| SIGN SPACING | |
|---|---|
| Posted Speed | Sign Spacing |
| 55 | 500' (150 m) |
| 50-45 | 350' (100 m) |
| <45 | 200' (60 m) |

**SYMBOLS**

- Arrow board
- Cone, drum or barricade
- Sign on portable or permanent support
- Work area
- Barricade or drum with flashing light
- Type III barricade with flashing lights
- Flagger with traffic control sign.

1. Refer to SIGN SPACING TABLE for distances.
2. Required for speeds > 40 MPH
3. Cones at 25' (8 m) centers for 250' (75 m). Additional cones may be placed at 50' (15 m) centers. When drums or Type I or Type II barricades are used, the interval between devices may be doubled.
4. Use flagger sign only when flagger is present.
5. For approved sidecast closures.
6. Cones, drums or barricades at 20' (6 m) in taper.

**GENERAL NOTES**

This Standard is used where at any time, day or night, any vehicle, equipment, workers or their activities encroach on the traffic lane(s) during shoulder operations or where construction requires lane closures in urban areas.

Calculate L as follows:

SPEED LIMIT — FORMULAS

| | English | (Metric) |
|---|---|---|
| 40 mph (70 km/h) or less: | $L=\frac{WS^2}{60}$ | $L=\frac{WS^2}{150}$ |
| 45 mph (80 km/h) or greater: | L=WS | L=0.65WS |

W = Width of offset in feet (meters).

S = Normal posted speed mph (km/h).

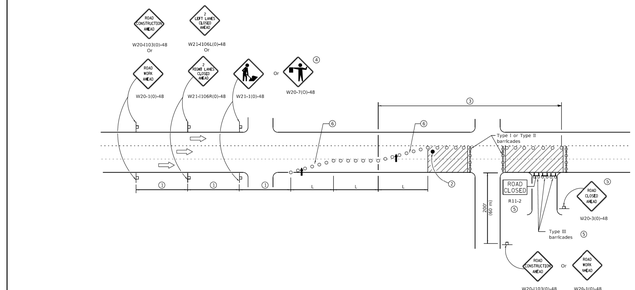
All dimensions are in inches (millimeters) unless otherwise shown.

Illinois Department of Transportation
ENGINEER OF POLICY, PROC. AND TRAINING — DATE: 10/1/2019
APPROVED — DATE: 1/1/2020
ENGINEER OF BUREAU OF TRAFFIC ENGINEERING

| DATE | REVISIONS |
|---|---|
| 1-1-24 | Revised workers sign number to agree with Current MUTCD |
| 1-1-19 | Omitted text "WORKERS" sign. |

**URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN**
(Sheet 1 of 2)

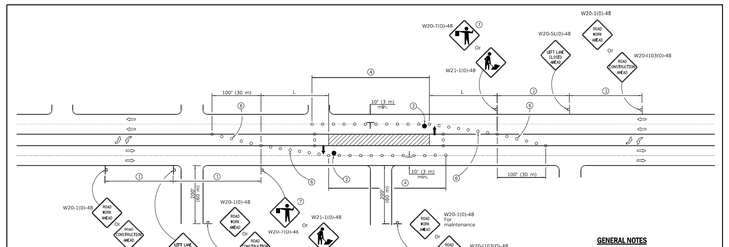
**STANDARD 701601-09**




Illinois Department of Transportation
ENGINEER OF POLICY, PROC. AND TRAINING — DATE: 10/1/2019
APPROVED — DATE: 1/1/2020
ENGINEER OF BUREAU OF TRAFFIC ENGINEERING

**URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN**

**STANDARD 701601-09**




| SIGN SPACING | |
|---|---|
| Posted Speed | Sign Spacing |
| 55 | 500' (150 m) |
| 50-45 | 350' (100 m) |
| <45 | 200' (60 m) |

**SYMBOLS**

- Arrow board
- Work area
- Barricade or drum with steady burning mondirectional light
- Flagger with traffic control sign
- Cone, drum or barricade
- Sign on portable or permanent support
- Type III barricade with flashing lights

**CASE I**

1. Refer to SIGN SPACING TABLE for distances.
2. Required for speeds > 40 mph (70 km/h).
3. Required if work exceeds 500' (164 m) or 1 block, repeat every 1 mile (1.6 km).
4. Cones at 25' (8 m) centers for 250' (75 m) on approach. Additional cones may be placed at 50' (15 m) centers. When drums or type I or II barricades are used, the interval between devices may be doubled.
5. For approved sidecast closures.
6. Cones, drums or barricades at 20' (6 m) centers in taper.
7. Use flagger sign only when flagger is present.

**GENERAL NOTES**

This Standard is used where at any time, day or night, any vehicle, equipment, workers or their activities encroach on the traffic lane(s) requiring the closure of one traffic lane in an Urban area.

If the work operation is performed between 9:00 a.m. and 3:00 p.m. and does not exceed 15 min, Traffic protection shall be as shown for Standard 701426.

Calculate L as follows:

SPEED LIMIT — FORMULAS

| | English | (Metric) |
|---|---|---|
| 40 mph (70 km/h) or less: | $L=\frac{WS^2}{60}$ | $L=\frac{WS^2}{150}$ |
| 45 mph (80 km/h) or greater: | L=WS | L=0.65WS |

W = Width of offset in feet (meters).

S = Normal posted speed mph (km/h).

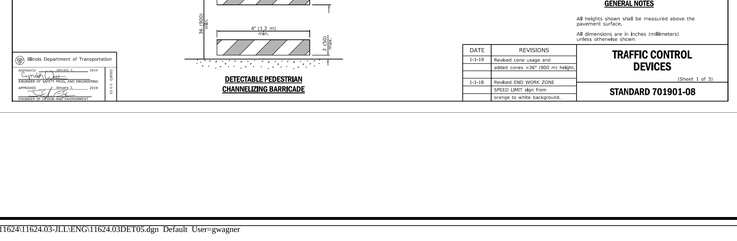
All dimensions are in inches (millimeters) unless otherwise shown.

Illinois Department of Transportation
ENGINEER OF POLICY, PROC. AND TRAINING — DATE: 10/1/2019
APPROVED — DATE: 1/1/2020
ENGINEER OF BUREAU OF TRAFFIC ENGINEERING

| DATE | REVISIONS |
|---|---|
| 1-1-19 | Revised to allow cones at night. |
| | |
| 1-1-18 | Moved arrow boards into closed lanes for CASE I. |

**URBAN LANE CLOSURE, MULTILANE, 2W WITH BIDIRECTIONAL LEFT TURN LANE**
(Sheet 1 of 4)

**STANDARD 701602-10**

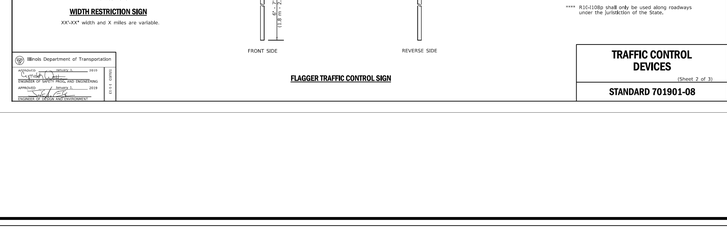



**CASE II**

Illinois Department of Transportation
ENGINEER OF POLICY, PROC. AND TRAINING — DATE: 10/1/2019
APPROVED — DATE: 1/1/2020
ENGINEER OF BUREAU OF TRAFFIC ENGINEERING

**URBAN LANE CLOSURE, MULTILANE, 2W WITH BIDIRECTIONAL LEFT TURN LANE**
(Sheet 2 of 4)

**STANDARD 701602-10**

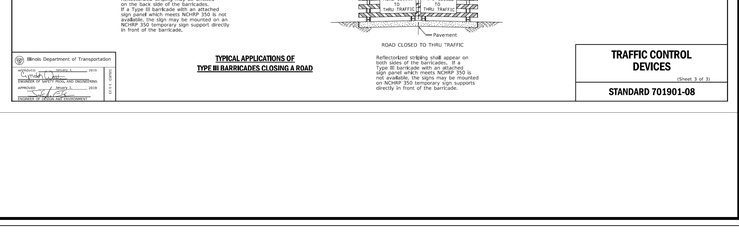



**CASE III**

Illinois Department of Transportation
ENGINEER OF POLICY, PROC. AND TRAINING — DATE: 10/1/2019
APPROVED — DATE: 1/1/2020
ENGINEER OF BUREAU OF TRAFFIC ENGINEERING

**URBAN LANE CLOSURE, MULTILANE, 2W WITH BIDIRECTIONAL LEFT TURN LANE**
(Sheet 3 of 4)

**STANDARD 701602-10**




**CASE IV**

Illinois Department of Transportation
ENGINEER OF POLICY, PROC. AND TRAINING — DATE: 10/1/2019
APPROVED — DATE: 1/1/2020
ENGINEER OF BUREAU OF TRAFFIC ENGINEERING

**URBAN LANE CLOSURE, MULTILANE, 2W WITH BIDIRECTIONAL LEFT TURN LANE**
(Sheet 4 of 4)

**STANDARD 701602-10**




**GENERAL NOTES**

All heights shown shall be measured above the pavement surface.

All dimensions are in inches (millimeters) unless otherwise shown.

Illinois Department of Transportation
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APPROVED — DATE: 1/1/2020
ENGINEER OF BUREAU OF TRAFFIC ENGINEERING

| DATE | REVISIONS |
|---|---|
| 1-1-19 | Revised cone usage and added cones >36" (900 m) height. |
| 1-1-18 | Revised END WORK ZONE SPEED LIMIT sign from orange to white background. |

**TRAFFIC CONTROL DEVICES**
(Sheet 1 of 3)

**STANDARD 701901-08**




This signaling is required for all projects 2 miles (3200 m) or more in length.

ROAD CONSTRUCTION NEXT X MILES sign shall be placed 500' (150 m) in advance of project limits.

END CONSTRUCTION sign shall be erected at the end of the job unless another job is within 2 miles (3200 m).

Dual sign displays shall be utilized on multi-lane highways.

**WORK LIMIT SIGNING**

Sign assembly as shown on Standards or as allowed by District Operations.

**HIGHWAY CONSTRUCTION SPEED ZONE SIGNS**

**** R10-(108p shall only be used along roadways under the jurisdiction of the State.

Illinois Department of Transportation
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APPROVED — DATE: 1/1/2020
ENGINEER OF BUREAU OF TRAFFIC ENGINEERING

**TRAFFIC CONTROL DEVICES**
(Sheet 2 of 3)

**STANDARD 701901-08**




Reflectorized sheeting shall be omitted on the barricades. If a Type III barricade with an attached sign panel which meets NCHRP 350 is not available, the sign may be mounted on an NCHRP 350 temporary sign support directly in front of the barricade.

Reflectorized sheeting shall appear on both sides of the barricades. If a Type III barricade with an attached sign panel which meets NCHRP 350 is not available, the signs may be mounted on NCHRP 350 temporary sign supports directly in front of the barricade.

Illinois Department of Transportation
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APPROVED — DATE: 1/1/2020
ENGINEER OF BUREAU OF TRAFFIC ENGINEERING

**TRAFFIC CONTROL DEVICES**
(Sheet 3 of 3)

**STANDARD 701901-08**

| NO. | DATE | REMARKS |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| 1 | 02/21/24 | REVISIONS PER ARCHITECT AND STORMTRAP |

**DETAILS - 5**

**OREST EXPRESS**
**NEW TRUCK TERMINAL**
**PALATINE, ILLINOIS**

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065
SPACECO INC.

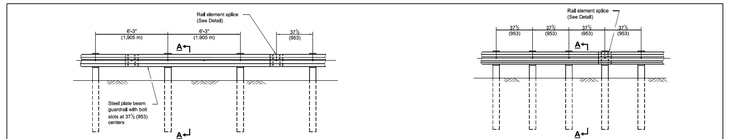
FILENAME: 11624.03DET05

DATE: 02/16/24

JOB NO. 11624.03

SHEET **D5**
20 OF 24

Attachment: Final Engineering Plans (2240 - 2266 N. Rand Road - FPD Distribution Use)




**ELEVATION**

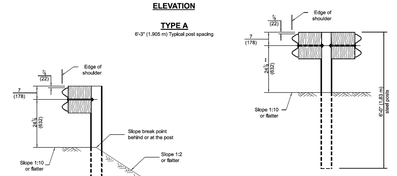
**TYPE A**

6'-3" (1,905 m) Typical post spacing

**ELEVATION**

**TYPE B**

37½ (953) Closed post spacing

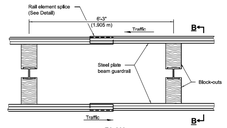



**SECTION A-A**




**SECTION B-B**

** When connecting Type D guardrail to an impact attenuator, adjust this dimension to match over a distance of 25'-0" (7.62 m) from point of connection if necessary.




**PLAN**

**TYPE D**

Double steel plate beam guardrail
6'-3" (1,905 m) typical post spacing

**GENERAL NOTES**

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

All dimensions are in inches (millimeters) unless otherwise shown.

Illinois Department of Transportation

APPROVED _____ 2024 — ENGINEER OF BRIDGES AND STRUCTURES

APPROVED _____ 2024 — ENGINEER OF POLICY AND PROCEDURES

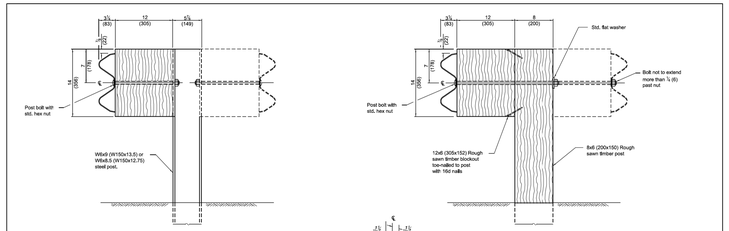
APRIL 1, 2024 — DATE ISSUED

| DATE | REVISIONS |
|---|---|
| 1-1-24 | Revised Section A-A to allow 8" posts |
| | at or behind the slope break point. |
| 1-1-18 | Revised steel post to have four |
| | holes in each flange. |

**STEEL PLATE BEAM GUARDRAIL**

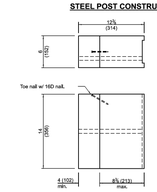
(Sheet 1 of 4)

**STANDARD 630001-13**

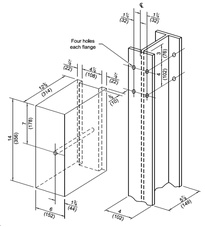



**STEEL POST CONSTRUCTION**

**WOOD POST CONSTRUCTION**

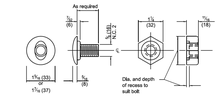



**TWO-PIECE WOOD BLOCKOUT OPTION**




Note:
All holes ¾ (20) dia.

**WOOD BLOCK-OUT AND STEEL POST DETAILS**




**POST OR SPLICE BOLT & NUT**

Illinois Department of Transportation

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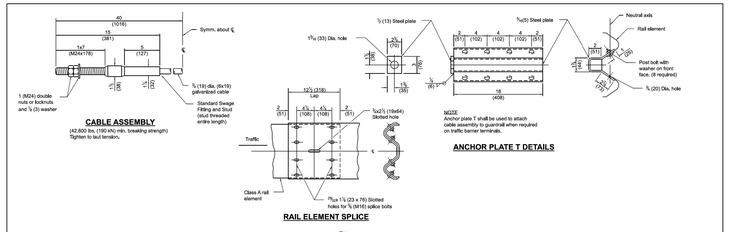
APRIL 1, 2024 — DATE ISSUED

**STEEL PLATE BEAM GUARDRAIL**

(Sheet 2 of 4)

**STANDARD 630001-13**

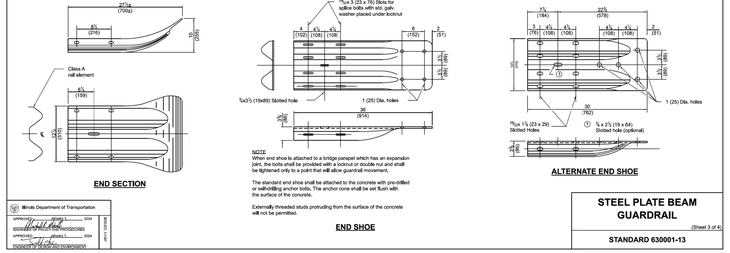



**CABLE ASSEMBLY**

(42,800 lbs. (190 kN) min. breaking strength)
Tighten to taut tension.

**ANCHOR PLATE T DETAILS**

**RAIL ELEMENT SPLICE**




**ALTERNATE END SHOE**

Illinois Department of Transportation

APPROVED _____ 2024 — ENGINEER OF BRIDGES AND STRUCTURES

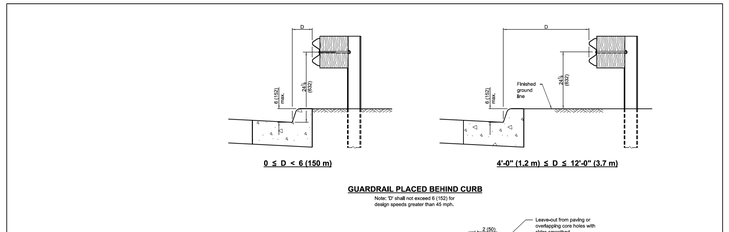
APPROVED _____ 2024 — ENGINEER OF POLICY AND PROCEDURES

APRIL 1, 2024 — DATE ISSUED

**STEEL PLATE BEAM GUARDRAIL**

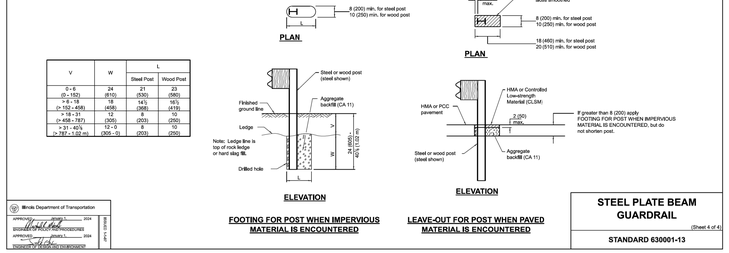
(Sheet 3 of 4)

**STANDARD 630001-13**




**GUARDRAIL PLACED BEHIND CURB**

Note: 'D' shall not exceed 6 (152) for design speeds greater than 45 mph.




| V | W | L Steel Post | L Wood Post |
|---|---|---|---|
| 0 < 6 (0 - 152) | 24 (610) | 21 (530) | 23 (580) |
| > 6 - 18 (> 152 - 458) | 18 (458) | 14½ (368) | 16½ (419) |
| > 18 - 31 (> 458 - 787) | 12 (305) | 8 (203) | 10 (250) |
| > 31 - 40½ (> 787 - 1,02 m) | 12 - 0 (305 - 0) | 8 (203) | 10 (250) |




**FOOTING FOR POST WHEN IMPERVIOUS MATERIAL IS ENCOUNTERED**




**LEAVE-OUT FOR POST WHEN PAVED MATERIAL IS ENCOUNTERED**

Illinois Department of Transportation

APPROVED _____ 2024 — ENGINEER OF BRIDGES AND STRUCTURES

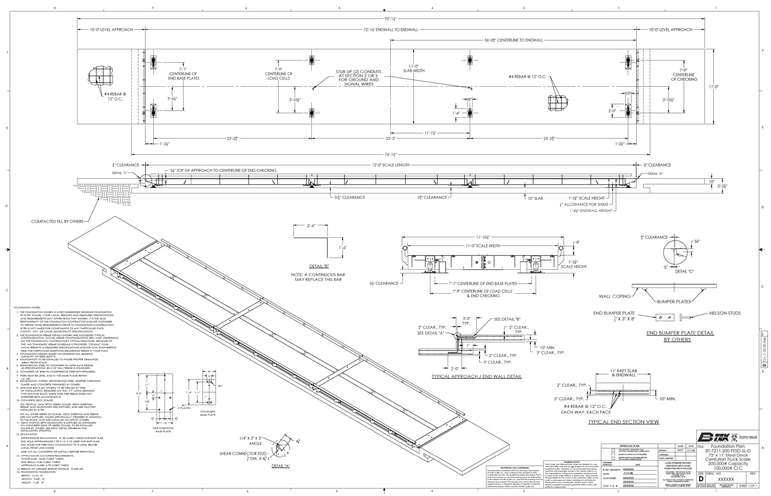
APPROVED _____ 2024 — ENGINEER OF POLICY AND PROCEDURES

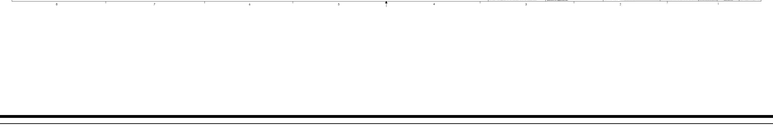
APRIL 1, 2024 — DATE ISSUED

**STEEL PLATE BEAM GUARDRAIL**

(Sheet 4 of 4)

**STANDARD 630001-13**

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Foundation Plan
Sleeve-it 72" L x 11'-0" Wide x 72" x 11' Sheet Piling Curb Return Truck Screw
100 MPH Wind Speed
100 DEGREE F.D.D.

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DETAILS - 6

OREST EXPRESS
NEW TRUCK TERMINAL
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

SPACECO INC.

FILENAME:
11624.03DET06

DATE:
02/16/24

JOB NO.
11624.03

SHEET
D6
21 OF 24

Attachment: Final Engineering Plans (2240 - 2266 N. Rand Road - FPD Distribution Use)

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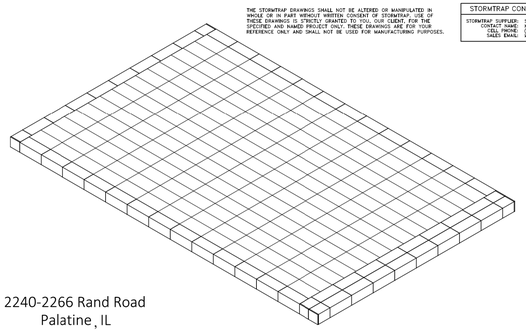
StormTrap®
MODULAR CONCRETE STORMWATER MANAGEMENT

THE STORMTRAP DRAWINGS SHALL NOT BE ALTERED OR MANIPULATED IN WHOLE OR IN PART WITHOUT WRITTEN CONSENT OF STORMTRAP. USE OF THESE DRAWINGS IS STRICTLY GRANTED TO YOU, OUR CLIENT, FOR THE SPECIFIED AND NAMED PROJECT ONLY. THESE DRAWINGS ARE FOR YOUR REFERENCE ONLY AND SHALL NOT BE USED FOR MANUFACTURING PURPOSES.



2240-2266 Rand Road
Palatine , IL

SHEET INDEX

| PAGE | DESCRIPTION |
|---|---|
| 0.0 | COVER SHEET |
| 1.0 | GENERAL NOTES |
| 1.1 | SINGLETRAP DESIGN CRITERIA |
| 2.0 | SINGLETRAP SYSTEM LAYOUT |
| 2.1 | SINGLETRAP FOUNDATION LAYOUT |
| 3.0 | SINGLETRAP INSTALLATION SPECIFICATION |
| 3.1 | SINGLETRAP INSTALLATION SPECIFICATION |
| 4.0 | SINGLETRAP BACKFILL SPECIFICATION |
| 5.0 | INFILTRATION SYSTEMS SPECIFICATION |
| 6.0 | SINGLETRAP MODULE TYPES |
| | |
| | |

STORMTRAP CONTACT INFORMATION

STORMTRAP SUPPLIER: STORMTRAP
CONTACT NAME: Tyra McCauley
PHONE: (813) 579-2226
SALES EMAIL: tmccauley@stormtrap.com

StormTrap
MODULAR CONCRETE STORMWATER MANAGEMENT
1207 WINDHAM PARKWAY
ROMEVILLE, IL 60446
P:815-941-4549 / F:331-318-5347

ENGINEER INFORMATION:
Spaceco, Inc. – Rosemont – Corporate Account
Rosemont, IL

PROJECT INFORMATION:
2240-2266 Rand Road
Palatine, IL

CURRENT ISSUE DATE:
02/14/2024

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PRELIMINARY

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COVER SHEET

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GENERAL NOTES:

1. STRUCTURE PROXIMITY LOADING DISCLAIMER:
   STORMTRAP MODULES AND FOUNDATION ARE NOT DESIGNED TO ACCEPT ANY ADDITIONAL LOADING FROM ANY NEARBY STRUCTURES NEXT TO OR OVER THE TOP OF STORMTRAP. EXAMPLES OF NEARBY STRUCTURES MAY INCLUDE BUT ARE NOT LIMITED TO BUILDINGS, FOUNDATION ELEMENTS, RETAINING WALLS, LIGHT POLES, BOLLARDS, SIGNPOSTS, FENCES, ADDITIONALLY, STORMTRAP IS NOT RESPONSIBLE FOR INSTALLATION CONFLICTS ARISING FROM ANY OF THESE NEARBY STRUCTURES. IF ADDITIONAL LOADING CONSIDERATIONS ARE REQUIRED FOR STRUCTURAL DESIGN OF STORMTRAP, PLEASE CONTACT STORMTRAP IMMEDIATELY. FOR LIGHT POLES SHOWN OVER THE TOP OF THE SYSTEM, STORMTRAP WILL PROVIDE A 5'-0" LATERAL DISTANCE CAVITY AROUND THE LIGHT POLE TO ACCOMMODATE IT. THE EOR TO TAKE RESPONSIBILITY FOR ENSURING THE LIGHT POLE IS NOT IMPACTING ANY LOADING ON THE STORMTRAP MODULES AND FOUNDATION.

2. TREE LOADING DISCLAIMER:
   THE NUMBER OF TREES OR WEIGHT OF TOTAL PLANT MATERIAL PRESENT ON TOP OF A SINGLE STORMTRAP MODULE SHALL NOT EXCEED 16,000 LBS. THE REQUIREMENTS LISTED HERE APPLY AT BOTH THE TIME OF INSTALLATION AND FOR THE LIFE OF THE TREES AND PLANTS IN QUESTION. THE EOR AND LANDSCAPE ARCHITECT ARE RESPONSIBLE FOR ENSURING THAT TREE AND OTHER PLANT ROOTS DO NOT INTERFERE WITH OR COMPROMISE THE FUNCTIONAL AND STRUCTURAL INTEGRITY OF STORMTRAP'S UNDERGROUND MODULES. APPROPRIATE MEASURES SHOULD BE TAKEN TO PREVENT ROOT GROWTH INTO THE STORMTRAP SYSTEM FROM ADJACENT OR OVERHEAD TREES. FURTHERMORE, THE ROOTS OF THE TREES MUST BE CONTAINED TO PREVENT FUTURE DAMAGE TO THE STORMTRAP SYSTEM. STORMTRAP ACCEPTS NO LIABILITY FOR DAMAGES CAUSED BY TREES OR OTHER VEGETATION PLACED AROUND OR ON TOP OF THE SYSTEM.

StormTrap
1207 WINDHAM PARKWAY
ROMEVILLE, IL 60446
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Spaceco, Inc. – Rosemont – Corporate Account
Rosemont, IL

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2240-2266 Rand Road
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GENERAL NOTES

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STORMTRAP DETAILS - 1

OREST EXPRESS
NEW TRUCK TERMINAL
PALATINE, ILLINOIS

| STRUCTURAL DESIGN LOADING CRITERIA | |
|---|---|
| LIVE LOADING: | AASHTO M1-20 HIGHWAY LOADING |
| GROUND WATER TABLE: | BELOW INVERT OF SYSTEM |
| SOIL BEARING PRESSURE: | 3000PSF |
| SOIL DENSITY: | 120 PCF |
| EQUIVALENT UNSATURATED LATERAL ACTIVE EARTH PRESSURE: | 35 PSF / FT. |
| EQUIVALENT SATURATED LATERAL ACTIVE EARTH PRESSURE: | 80 PSF/FT. (IF WATER TABLE PRESENT) |
| APPLICABLE CODES: | ASTM C857<br>ACI-318 |
| BACKFILL TYPE: | SEE SHEET 4.0 FOR BACKFILL OPTIONS |

| STORMTRAP SYSTEM INFORMATION |
|---|
| UNIT MEASROW: 5'-8" SINGLETRAP |

SITE SPECIFIC DESIGN CRITERIA

1. STORMTRAP UNITS SHALL BE MANUFACTURED AND INSTALLED ACCORDING TO SHOP DRAWINGS APPROVED BY THE INSTALLING CONTRACTOR AND ENGINEER OF RECORD. THE SHOP DRAWINGS SHALL INDICATE SIZE AND LOCATIONS OF ROOF OPENINGS AND INLET/ OUTLET PIPE TYPES, SIZES, INVERT ELEVATIONS AND SIZE OF OPENINGS.
2. COVER RANGE: MIN. 1.50" MAX. 4.00" CONSULT STORMTRAP FOR ADDITIONAL COVER OPTIONS.
3. ALL DIMENSIONS AND SOIL CONDITIONS, INCLUDING BUT NOT LIMITED TO GROUNDWATER AND SOIL BEARING CAPACITY ARE REQUIRED TO BE VERIFIED IN THE FIELD BY OTHERS PRIOR TO STORMTRAP INSTALLATION.
4. FOR STRUCTURAL CALCULATIONS THE GROUND WATER TABLE IS ASSUMED TO BE BELOW INVERT OF SYSTEM IF WATER TABLE IS DIFFERENT THAN ASSUMED, CONTACT STORMTRAP.

VCBMP VOLUME CALCULATION

=TOTAL VCBMP STORAGE REQUIRED = 23,858.00 CUBIC FEET
=VCBMP STORAGE PROVIDED = 20,284.90 CUBIC FEET (ELEV 50.75- ELEV 49.33, 50% IN SYSTEM)
=VCBMP STORAGE PROVIDED = 3,738.72 CUBIC FEET (ELEV 48.66 – ELEV 48.33, 36% STONE VOID)
=TOTAL VCBMP STORAGE PROVIDED = 24,083.62 CUBIC FEET

DETENTION VOLUME CALCULATION

=TOTAL WATER STORAGE REQUIRED = 141,570.00 CUBIC FEET
=WATER STORAGE PROVIDED = 121,423.59 CUBIC FEET (ELEV 55.00 – ELEV 50.75, 100% IN SYSTEM)
=WATER STORAGE PROVIDED = 20,284.90 CUBIC FEET (ELEV 50.75 – ELEV 49.33, 50% VCBMP CREDIT)
=TOTAL WATER STORAGE PROVIDED = 141,708.59 CUBIC FEET

SEASONAL HIGH WATER TABLE

=SWT# = _____' (ELEVATION)
*TO BE VERIFIED BY OTHERS
=VCBMP BOTTOM TO SWT# = _____' (DISTANCE)
=AMOUNT OF MATRIX SOIL ABOVE SWT# = _____' (DISTANCE)



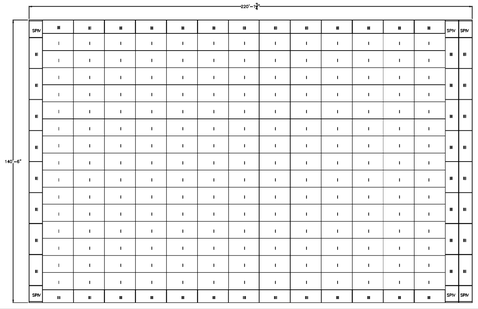
5'-8" SINGLETRAP

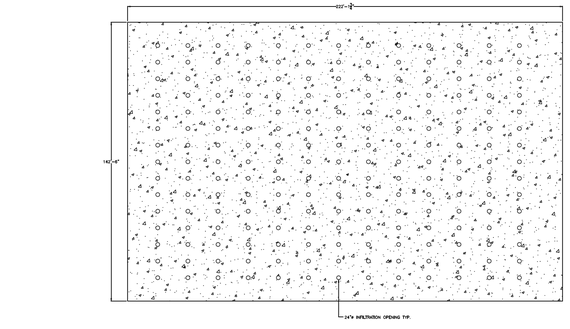
BILL OF MATERIALS

| QTY | UNIT TYPE | DESCRIPTION | WEIGHT |
|---|---|---|---|
| 100 | I | 5'-6" SINGLETRAP | 13900 |
| 12 | II | 5'-6" SINGLETRAP | 18736 |
| 50 | III | 5'-6" SINGLETRAP | 16254 |
| 12 | IV | 5'-6" SINGLETRAP | 17585 |
| 0 | VII | 5'-6" SINGLETRAP | 0 |
| 0 | VIII+1 | 5'-6" SINGLETRAP | 0 |
| 0 | VIII+2 | 5'-6" SINGLETRAP | 0 |
| 0 | VIII+3 | 5'-6" SINGLETRAP | 0 |
| 0 | VI+x | 5'-6" SINGLETRAP | 0 |
| 0 | SPW | 5'-6" SINGLETRAP | VARIES |
| 0 | FP | 5'-6" SINGLETRAP | VARIES |
| 1 | FX PANEL | 4" THICK PANEL | 3893 |
| 1 | FF PANEL | 6" THICK PANEL | 5054 |
| 1 | FP PANEL | 8" PIPE WHERE PANEL | 0 |
| 48 | JOINTWRAP | 16' PER ROLL | |
| 72 | JOINTTAPE | 114' PER ROLL | |
| | TOTAL PIECES = 251 | | |
| | TOTAL PANELS = 4 | | |
| | HEAVIEST PICK WEIGHT = 18254 | | |

DESIGN CRITERIA
ALLOWABLE MAX GRADE = 59.50'
ALLOWABLE MIN GRADE = 57.00'
TOP OF VCBMP/BOTTOM DETENTION = 55.00'
SYSTEM INVERT = 49.33'

NOTES:
1. DIMENSIONING OF STORMTRAP SYSTEM SHOWN BELOW ALLOW FOR A 3/4" GAP BETWEEN EACH MODULE.
2. ALL DIMENSIONS TO BE VERIFIED IN THE FIELD BY OTHERS.
3. SEE SHEET 3.0 FOR INSTALLATION SPECIFICATIONS.
4. SP = INDICATES A MODULE WITH MODIFICATIONS.
5. P = INDICATES A MODULE WITH A PANEL ATTACHMENT.
6. CONTRACTORS RESPONSIBILITY TO ENSURE CONSISTENCY/ACCURACY TO FINAL ENGINEER OF RECORD PLAN SET.
7. IN ORDER FOR STORMTRAP TO GENERATE APPROVAL DRAWINGS, CIVIL ENGINEERING DRAWINGS MUST BE PROVIDED TO STORMTRAP AND SHALL INCLUDE ALL PIPE SIZES, PIPE MATERIAL, PIPE INVERT ELEVATIONS, ACCESS OPENING SIZE AND GRADE. IN ADDITION, FINAL GRADING PLANS SHALL ALSO INCLUDE MINIMUM AND MAXIMUM GRADES OVER THE TOP OF THE STORMTRAP SYSTEM.



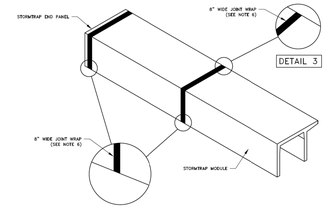

CONCRETE FOUNDATION NOTES:
1. CONCRETE FOUNDATION TO BE SUPPLIED AND INSTALLED BY OTHERS.
2. CONCRETE SHALL BE 4000 PSI, 28 DAY COMPRESSIVE AIR, 3"-5" MAX SLUMP.
3. MIN ALLOWABLE SOIL PRESSURE AS INDICATED ON SHEET 1.1.
4. SOIL CONDITIONS TO BE VERIFIED ON SITE BY OTHERS.
5. REBAR: ASTM A615 GRADE 60, ELASTIC BAR.
6. DIMENSION OF FOUNDATION MUST HAVE 1'-0" OVERHANG BEYOND EXTERNAL FACE OF MODULE.
7. DIMENSION OF STORMTRAP SYSTEM ALLOW FOR A 3/4" GAP BETWEEN EACH MODULE.
8. ALL DIMENSIONS TO BE VERIFIED IN THE FIELD BY OTHERS.
9. SEE SHEET 3.0 FOR INSTALLATION SPECIFICATIONS.

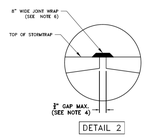
STORMTRAP FOUNDATION DETAIL

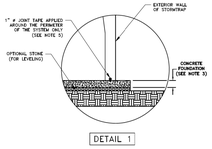
| MS-20 & MS-25 LOADING – (ACI 318, ST2) | | | | |
|---|---|---|---|---|
| MAXIMUM SYSTEM COVER | SLAB THICKNESS | CONCRETE STRENGTH | REINFORCEMENT (BOTH DIRECTIONS) | "A" CLEAR COVER |
| 0'-6" – 1'-0" | 8" | 4000 PSI | #4 @ 15" O.C. | 3.5" |
| 1'-1" – 2'-0" | 8" | 4000 PSI | #4 @ 15" O.C. | 3.5" |
| 2'-1" – 3'-0" | 8" | 4000 PSI | #4 @ 12" O.C. | 3.5" |
| 3'-1" – 4'-0" | 8" | 4000 PSI | #4 @ 12" O.C. | 3.5" |
| 4'-1" – 5'-0" | 8" | 4000 PSI | #5 @ 15" O.C. | 3.375" |
| 5'-1" – 6'-0" | 8" | 4000 PSI | #5 @ 15" O.C. | 3.375" |
| 6'-1" – 7'-0" | 8" | 4000 PSI | #5 @ 12" O.C. | 3.375" |
| 7'-1" – 8'-0" | 8" | 4000 PSI | #5 @ 12" O.C. | 3.875" |
| 8'-1" – 9'-0" | 8" | 4000 PSI | #5 @ 12" O.C. | 3.875" |
| 9'-1" – 10'-0" | 8" | 4000 PSI | #5 @ 12" O.C. | 3.875" |

STORMTRAP INSTALLATION SPECIFICATION

1. STORMTRAP SHALL BE INSTALLED IN ACCORDANCE WITH ASTM C891 (STANDARD PRACTICE FOR INSTALLATION OF UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES), THE FOLLOWING ADDITIONS AND/OR EXCEPTIONS ARE PROVIDED FOR EMPHASIS. THE MENTION OF THESE ITEMS DOES NOT PRECLUDE THE INSTALLING CONTRACTOR FROM FOLLOWING ASTM C891 IN ITS ENTIRETY. STORMTRAP IS NOT RESPONSIBLE FOR ANY INSTALLATION ISSUES.
2. IT IS THE RESPONSIBILITY OF THE INSTALLING CONTRACTOR TO ENSURE THAT PROPER/ADEQUATE EQUIPMENT IS USED TO SET/INSTALL THE MODULES.
3. STORMTRAP MODULES SHALL BE PLACED ON A LEVEL CONCRETE FOUNDATION (SEE SHEET 2.1) WITH A 1'-0" OVERHANG ON ALL SIDES THAT SHALL BE POURED IN PLACE BY INSTALLING CONTRACTOR. A QUALIFIED GEOTECHNICAL ENGINEER WILL BE EMPLOYED, BY OWNER, TO PROVIDE ASSISTANCE IN EVALUATING THE EXISTING SOIL CONDITIONS TO ENSURE THAT THE SOIL BEARING PRESSURE MEETS OR EXCEEDS THE STRUCTURAL DESIGN LOADING CRITERIA AS SPECIFIED ON SHEET 1.1.
4. THE STORMTRAP MODULES SHALL BE PLACED SUCH THAT THE MAXIMUM SPACE BETWEEN ADJACENT MODULES DOES NOT EXCEED 3" (SEE DETAIL 2). IF THE SPACE EXCEEDS 3", THE MODULES SHALL BE RESET WITH APPROPRIATE ADJUSTMENT MADE TO LINE AND GRADE TO BRING THE SPACE INTO SPECIFICATION.
5. THE PERIMETER HORIZONTAL JOINT BETWEEN THE STORMTRAP MODULES AND THE CONCRETE FOUNDATION SHALL BE SEALED TO THE FOUNDATION WITH PRE-FORMED MASTIC JOINT SEALER ACCORDING TO ASTM C891, 8.8 AND 8.12. (SEE DETAIL 1). THE MASTIC JOINT TAPE DOES NOT PROVIDE A WATERTIGHT SEAL.
6. ALL EXTERIOR ROOF AND EXTERIOR VERTICAL WALL JOINTS BETWEEN ADJACENT STORMTRAP MODULES SHALL BE SEALED WITH 8" WIDE PRE-FORMED, COLE-APPLIED, SELF-ADHERING ELASTOMERIC RESIN, BONDED TO A WOVEN HIGHLY PUNCTURE RESISTANT POLYMER WRAP, CONFORMING TO ASTM C891 AND SHALL BE INTEGRATED WITH PRIMER SEALANT AS APPROVED BY STORMTRAP (SEE DETAILS 2, 3, & 4). THE JOINT WRAP DOES NOT PROVIDE A WATERTIGHT SEAL. THE JOINT WRAP SHALL BE INSTALLED AFTER THE MASTIC JOINT TAPE HAS BEEN INSTALLED. THE ADHESIVE EXTERIOR JOINT WRAP SHALL BE INSTALLED ACCORDING TO THE FOLLOWING INSTALLATION INSTRUCTIONS:
   6.1. USE A BRUSH OR WET CLOTH TO THOROUGHLY CLEAN THE OUTSIDE SURFACE AT THE POINT WHERE JOINT WRAP IS TO BE APPLIED.
   6.2. A RELEASE PAPER PROTECTS THE ADHESIVE SIDE OF THE JOINT WRAP. PLACE THE ADHESIVE TAPE (ADHESIVE SIDE DOWN) AROUND THE STRUCTURE, REMOVING THE RELEASE PAPER AS YOU GO. PRESS THE JOINT WRAP FIRMLY AGAINST THE STORMTRAP MODULE SURFACE WHEN APPLYING.
7. IF THE CONTRACTOR NEEDS TO CANCEL ANY SHIPMENTS, THEY MUST DO SO 48 HOURS PRIOR TO THEIR SCHEDULED ARRIVAL AT THE JOB SITE. IF CANCELED AFTER THAT TIME, PLEASE CONTACT THE PROJECT MANAGER.
8. IF THE STORMTRAP MODULE(S) IS DAMAGED IN ANY WAY PRIOR, DURING, OR AFTER INSTALL, STORMTRAP MUST BE CONTACTED IMMEDIATELY TO ASSESS THE DAMAGE AND DETERMINE WHETHER OR NOT THE MODULE(S) WILL NEED TO BE REPLACED. IF ANY MODULE ARRIVES AT THE JOBSITE DAMAGED DO NOT UNLOAD IT; CONTACT STORMTRAP IMMEDIATELY. ANY DAMAGE NOT REPORTED BEFORE THE TRUCK IS UNLOADED WILL BE THE CONTRACTOR'S RESPONSIBILITY.
9. STORMTRAP MODULES CANNOT BE ALTERED IN ANY WAY AFTER MANUFACTURING WITHOUT WRITTEN CONSENT FROM STORMTRAP.




CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 698-4060 Fax: (847) 698-4065

SPACECO INC.

FILENAME: 11624.03ST-1

DATE: 02/16/24

JOB NO. 11624.03

SHEET
ST-1
22 OF 24

Attachment: Final Engineering Plans (2240 - 2266 N. Rand Road - FPD Distribution Use)

## STORMTRAP MODULE LIFTING SPECIFICATION

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL (4) CHAINS/CABLES ARE SECURED PROPERLY TO THE LIFTING ANCHORS AND IN EQUAL TENSION WHEN LIFTING THE STORMTRAP MODULE.
2. MINIMUM 7'-0" CHAIN/CABLE LENGTH TO BE USED TO LIFT STORMTRAP MODULES (SUPPLIED BY CONTRACTOR).
3. CONTRACTOR TO ENSURE MINIMUM LIFTING ANGLE IS 60° FROM TOP SURFACE OF STORMTRAP MODULE. SEE DETAIL.
4. IT IS UNDERSTOOD AND AGREED THAT AT ALL TIMES DURING WHICH HOISTING AND RIGGING EQUIPMENT IS BEING SUPPLIED TO THE PURCHASER, OPERATOR OF SUCH EQUIPMENT SHALL BE IN CHARGE OF HIS ENTIRE EQUIPMENT AND SHALL AT ALL TIMES BE THE JUDGE OF THE SAFETY AND PROPERTY OF ANY SUGGESTION TO HIM FROM THE SELLER, ITS AGENTS OR EMPLOYEES. PURCHASER AGREES TO INDEMNIFY AND HOLD HARMLESS SELLER FROM ALL LOSS, CLAIMS, DEMANDS OR CAUSES OF ACTION, WHICH MAY ARISE FROM THE EXISTENCE OR OPERATION OF SAID EQUIPMENT.

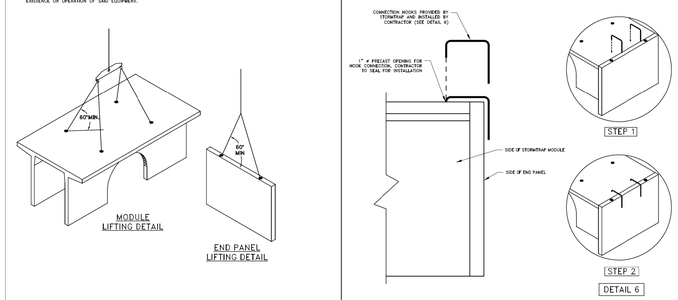



MODULE LIFTING DETAIL

END PANEL LIFTING DETAIL

## END PANEL ERECTION/INSTALLATION SPECIFICATION

1. END PANELS WILL BE SUPPLIED TO CLOSE OFF OPEN ENDS OF ROWS.
2. PANELS SHALL BE INSTALLED IN A TILT UP FASHION DIRECTLY ADJACENT TO OPEN END OF MODULE (REFER TO SHEET 2.0 FOR END PANEL LOCATIONS).
3. CONNECTION HOOKS WILL BE SUPPLIED WITH END PANELS TO SECURELY CONNECT PANEL TO ADJACENT STORMTRAP MODULE (SEE PANEL CONNECTION ELEVATION VIEW).
4. ONCE CONNECTION HOOK IS ATTACHED, LIFTING CLUTCHES MAY BE REMOVED.
5. JOINT WRAP SHALL BE PLACED AROUND PERIMETER JOINT PANEL (SEE SHEET 5.0).




PANEL CONNECTION ELEVATION VIEW

StormTrap
MADE USED IN [WIN/STORMTRAP.COM/MADE]
1287 WINDHAM PARKWAY
ROMEOVILLE, IL 60446
P:815-941-4565 / F:331-318-5347

ENGINEER INFORMATION:
Spaceco, Inc. – Rosemont – Corporate Account
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2240–2266 Rand Road
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| 1 | 02/14/2024 | PRELIMINARY | JH |

SCALE:
NTS

SHEET TITLE:
SINGLETRAP INSTALLATION SPECIFICATION

SHEET NUMBER:
3.1

### ZONE CHART

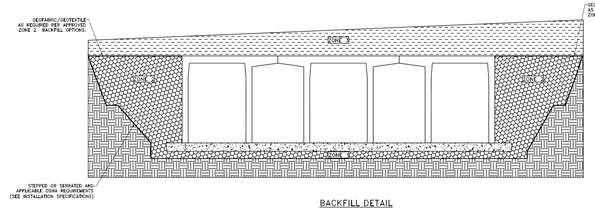
| ZONES | ZONE DESCRIPTIONS | REMARKS |
|---|---|---|
| ZONE 1 | FOUNDATION AGGREGATE | #5 (2") STONE ANGULAR AGGREGATE (SEE NOTE 4) |
| ZONE 2 | BACKFILL | UNIFIED SOILS CLASSIFICATION GW, GP, SW, SP1 OR SEE BELOW FOR APPROVED BACKFILL OPTIONS |
| ZONE 3 | FINAL COVER OVERTOP | MATERIALS NOT TO EXCEED 120 PCF |

### APPROVED ZONE 2 BACKFILL OPTIONS

| OPTION | REMARKS |
|---|---|
| 2" STONE AGGREGATE | THE STONE AGGREGATE SHALL CONSIST OF CLEAN AND FREE DRAINING ANGULAR MATERIAL. THE SIZE OF TWO MATERIAL SHALL HAVE 100% PASSING THE 1" SIEVE WITH 0% TO 5% PASSING THE #8 SIEVE. TWO MATERIAL SHALL BE SEPARATED FROM NATIVE MATERIAL USING GEOFABRIC AROUND THE PERIMETER OF THE BACKFILL (ASTM SIZE #57) AS DETERMINED BY THE GEOTECHNICAL ENGINEER. |
| SAND | IMPORTED PURE SAND IS PERMITTED TO BE USED AS BACKFILL IF IT IS CLEAN AND FREE DRAINING. THE SAND USED FOR BACKFILLING SHALL HAVE LESS THAN 40% PASSING #40 SIEVE AND LESS THAN 5% PASSING #200 SIEVE. TWO MATERIAL SHALL BE SEPARATED FROM NATIVE MATERIAL USING GEOFABRIC AROUND THE PERIMETER OF THE SAND BACKFILL. |
| CRUSHED CONCRETE AGGREGATE | CLEAN, FREE DRAINING CRUSHED CONCRETE AGGREGATE MATERIAL CAN BE USED AS BACKFILL FOR STORMTRAP'S MODULES. THE SIZE OF TWO MATERIAL SHALL HAVE 100% PASSING THE 1" SIEVE WITH 0% TO 5% PASSING THE #8 SIEVE. TWO MATERIAL SHALL BE SEPARATED FROM NATIVE MATERIAL USING GEOFABRIC AROUND THE PERIMETER OF THE BACKFILL. |
| ROAD RACK | STONE AGGREGATE 100% PASSING THE 1-1/2" SIEVE WITH LESS THAN 12% PASSING THE #200 SIEVE (ASTM SIZE #467). GEOFABRIC AS PER GEOTECHNICAL ENGINEER RECOMMENDATION. |

## STORMTRAP ZONE INSTALLATION SPECIFICATION/PROCEDURE

1. THE FILL PLACED AROUND THE STORMTRAP MODULES MUST BE DEPOSITED ON BOTH SIDES AT THE SAME TIME AND TO APPROXIMATELY THE SAME ELEVATION IN ORDER TO PREVENT ANY WEDGING ACTION AGAINST THE STRUCTURE. NO MORE THAN THE FILL ON THE OPPOSITE SIDE, BACKFILL SHALL EITHER BE COMPACTED AND/OR VIBRATED TO ENSURE THAT BACKFILL AGGREGATE/STONE MATERIAL IS WELL SEATED AND PROPERLY INTER LOCKED. CARE SHALL BE TAKEN TO PREVENT ANY WEDGING ACTION AGAINST THE STRUCTURE, AND ALL SLOPES WITHIN THE AREA TO BE BACKFILLED MUST BE STEPPED OR SERRATED TO PREVENT WEDGING ACTION. CARE SHALL ALSO BE TAKEN AS NOT TO DISRUPT THE JOINT WRAP BETWEEN THE MODULES AND END PANELS DURING THE BACKFILLING PROCESS. REFER TO THE BACKFILL CHART ON THIS PAGE FOR APPROVED BACKFILL OPTIONS. IF NATIVE EARTH IS SUSCEPTIBLE TO MIGRATION, CONFIRM WITH GEOTECHNICAL ENGINEER AND PROVIDE PROTECTION AS REQUIRED (PROVIDED BY OTHERS). ALL MODULES MUST BE SET AND ALL SIDES MUST BE FULLY BACKFILLED BEFORE TRAVEL OVERTOP THE SYSTEM IS PERMITTED. SEE NOTE 2 FOR EXCEPTIONS AND LIMITATIONS.
2. THE FILL PLACED OVERTOP THE SYSTEM SHALL BE PLACED IN MINIMUM 6" LIFTS. AT NO TIME SHALL MACHINERY OR VEHICLES GREATER THAN THE DESIGN LIVE LOAD LISTED ON SHEET 1.0 TRAVEL OVERTOP THE SYSTEM. IF TRAVEL OVER THE SYSTEM OCCURS BEFORE THE MINIMUM DESIGN COVER IS ACHIEVED, IT MAY BE NECESSARY TO REDUCE THE ULTIMATE LOAD/BURDEN OF THE OPERATING MACHINERY SO AS TO NOT EXCEED THE DESIGN CAPACITY OF THE SYSTEM. CONSTRUCTION EQUIPMENT SHALL NOT BE PERMITTED TO TRAVEL OVER THE SYSTEM UNTIL TRAVEL PARALLEL TO THE LONGITUDINAL AXIS OF THE STORMTRAP MODULES WHENEVER POSSIBLE.
3. THE VIBRATORY FUNCTION OF ANY ROLLER, COMPACTOR, VEHICLE, ETC. SHALL NOT BE USED OVERTOP THE SYSTEM WITHOUT PRIOR APPROVAL FROM STORMTRAP. IN SOME CASES, HAND COMPACTION MAY BE NECESSARY TO ENSURE THAT THE ALLOWABLE DESIGN LOADING IS NOT EXCEEDED.
4. STONE AGGREGATE FOUNDATION IN ZONE 1 MAY BE REQUIRED FOR THE FOLLOWING:
   A.) INSTALLATION – IF INSTALLATION IS REQUIRED, A FREE DRAINING MATERIAL SHALL BE USED AT A DEPTH RECOMMENDED BY THE ENGINEER OF RECORD. DRAINING AGGREGATE IS ROUND AND 80% AGGREGATE, RETAINED ON 3/8" (DEVELOPMENT OF AGGREGATE SIZE BETWEEN 3/4 AND 1", AND ONLY 5% OF MATERIAL PASSING #16 SIEVE.
   B.) LEVELING – STORMTRAP RECOMMENDS STONE SUBBASE FOR LEVELING PURPOSES ONLY (OPTIONAL).




BACKFILL DETAIL

StormTrap
MADE USED IN [WIN/STORMTRAP.COM/MADE]
1287 WINDHAM PARKWAY
ROMEOVILLE, IL 60446
P:815-941-4565 / F:331-318-5347

ENGINEER INFORMATION:
Spaceco, Inc. – Rosemont – Corporate Account
Rosemont, IL

PROJECT INFORMATION:
2240–2266 Rand Road
Palatine, IL

CURRENT ISSUE DATE:
02/14/2024

ISSUED FOR:
PRELIMINARY

| REV. | DATE: | ISSUED FOR: | CHK'D BY: |
|---|---|---|---|
| 1 | 02/14/2024 | PRELIMINARY | JH |

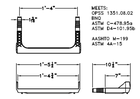
SCALE:
NTS

SHEET TITLE:
SINGLETRAP BACKFILL SPECIFICATION

SHEET NUMBER:
4.0

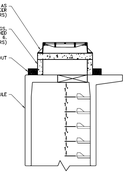
## ACCESS OPENING SPECIFICATION

1. A TYPICAL ACCESS OPENING FOR THE STORMTRAP SYSTEM ARE 2'-0" IN DIAMETER. THE MINIMUM ACCESS OPENING SHOULD BE 1'-0" IN DIAMETER NEED TO BE APPROVED BY STORMTRAP. ALL OPENINGS MUST RETAIN AT LEAST 2'-0" OF CLEARANCE FROM THE END OF THE STORMTRAP MODULE UNLESS NOTED OTHERWISE. ALL ACCESS OPENINGS TO BE LOCATED ON INSIDE LEG UNLESS OTHERWISE SPECIFIED. SEE SHEET 2.0 FOR SIZES AND LOCATIONS.
2. UNLESS OTHERWISE SPECIFIED, PLASTIC COATED STEEL STEPS PROVIDED BY M.A. INDUSTRIES PART #PS3-PFC OR APPROVED EQUAL (SEE STEP DETAIL) ARE PROVIDED INSIDE ANY MODULE WHERE DEEMED NECESSARY. THE HIGHEST STEP IN THE MODULE IS TO BE PLACED A DISTANCE OF 1'-10" FROM THE INSIDE EDGE OF THE STORMTRAP MODULES. ALL REMAINING STEPS SHALL BE PLACED AT A DISTANCE BETWEEN 10" MIN AND 14" MAX BETWEEN THEM. STEPS MAY BE MOVED OR ADDED TO AVOID OPENINGS OR OTHER IRREGULARITIES IN THE MODULE.
3. STORMTRAP LIFTING INSERTS MAY BE RELOCATED TO AVOID INTERFERENCE WITH ACCESS OPENINGS OR THE CENTER OF GRAVITY OF THE MODULE AS NEEDED.
4. STORMTRAP ACCESS OPENINGS MAY BE RELOCATED TO AVOID INTERFERENCE WITH INLET AND/OR OUTLET PIPE OPENINGS SO PLACEMENT OF STEPS IS ATTAINABLE.
5. ACCESS OPENINGS SHOULD BE LOCATED IN ORDER TO MEET THE APPROPRIATE MUNICIPAL REQUIREMENTS. STORMTRAP RECOMMENDS AT LEAST TWO ACCESS OPENINGS PER SYSTEM FOR ACCESS AND INSPECTION.
6. USE PRECAST ADJUSTING RINGS AS NEEDED TO MEET GRADE. STORMTRAP RECOMMENDS FOR COVER OVER 2' TO USE PRECAST BARREL OR CONE SECTIONS. (PROVIDED BY OTHERS)




STEP DETAIL

*** NOTICE *** 05-25-2022
DUE TO CURRENT INCONSISTENCIES IN THE 16" STEP SUPPLY, STORMTRAP MAY SUBSTITUTE THE 16" STEP WITH THE CLOSEST ALTERNATIVE LENGTH STEP UNTIL THE SUPPLY CHAIN ISSUE IS RESOLVED.




RISER/STAIR DETAIL

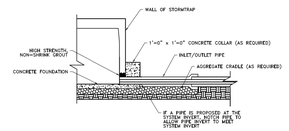
## PIPE OPENING SPECIFICATION

1. MINIMUM EDGE DISTANCE FOR AN OPENING ON THE OUTSIDE WALL SHALL BE NO LESS THAN 1'-0".
2. CONNECTING PIPES MAY BE INSTALLED WITH A 1'-0" CONCRETE COLLAR AND AN AGGREGATE CRADLE (AS REQUIRED) FOR AT LEAST ONE PIPE LENGTH (SEE PIPE CONNECTION DETAIL). A STRUCTURAL GRADE CONCRETE OF HIGH STRENGTH, NON-SHRINK GROUT WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI MAY BE USED.
3. THE ANNULAR SPACE BETWEEN THE PIPE AND THE HOLE SHALL BE FILLED WITH HIGH STRENGTH NON-SHRINK GROUT.

## PIPE INSTALLATION INSTRUCTIONS

1. CLEAN AND LIGHTLY LUBRICATE ALL OF THE PIPE TO BE INSERTED INTO STORMTRAP.
2. IF PIPE IS CUT, CARE SHOULD BE TAKEN TO ALLOW NO SHARP EDGES. BEVEL AND LUBRICATE LEAD END OF PIPE.
3. ALIGN CENTER OF PIPE TO CORRECT ELEVATION AND INSERT INTO OPENING.

NOTE: ALL ANCILLARY PRODUCTS/SPECIFICATIONS RECOMMENDED AND SHOWN ON THIS SHEET INCLUDING BUT NOT LIMITED TO CONCRETE COLLARS, AGGREGATE CRADLES, GRADE RINGS, RISER SECTIONS, ETC., ARE RECOMMENDATIONS ONLY AND SUBJECT TO CHANGE PER THE INSTALLING CONTRACTOR AND/OR PER LOCAL MUNICIPAL CODE/REQUIREMENTS.




NOTCHED PIPE CONNECTION DETAIL WHEN PIPE INVERT IS AT INVERT OF STORMTRAP SYSTEM

StormTrap
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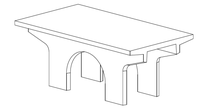
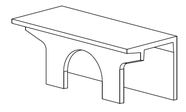
SHEET TITLE:
PIPE / ACCESS OPENING SPECIFICATION

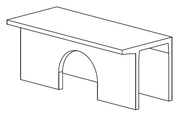
SHEET NUMBER:
5.0



TYPE I



TYPE III



TYPE IV

TYPE IV END PANEL

NOTES:
1. OPENING LOCATIONS AND SHAPES MAY VARY.
2. SP – INDICATES A MODULE WITH MODIFICATIONS.
3. P – INDICATES A MODULE WITH A PANEL ATTACHMENT.
4. POCKET WINDOW OPENINGS ARE OPTIONAL.

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SCALE:
NTS

SHEET TITLE:
SINGLETRAP MODULE TYPES

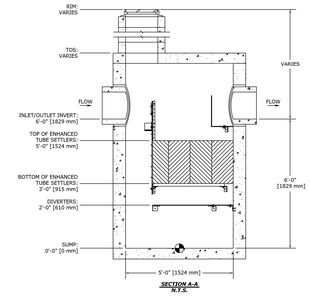
SHEET NUMBER:
6.0

| NO. | DATE | REMARKS |
|---|---|---|
| 1 | 02/21/24 | REVISIONS PER ARCHITECT AND STORMTRAP |

STORMTRAP DETAILS - 2

OREST EXPRESS
NEW TRUCK TERMINAL
PALATINE, ILLINOIS

| SITE SPECIFIC DATA | | | |
|---|---|---|---|
| STRUCTURE ID | | | WQS-1 |
| WATER QUALITY FLOW RATE (CFS) | | | 1.13 |
| PEAK FLOW RATE (CFS) | | | TBD |
| SEDIMENT STORAGE CAPACITY (CF) | | | 22.9 |
| RIM ELEVATION | | | 58.05 |
| PIPE DATA | I.E. | MATERIAL | DIAMETER |
| INLET PIPE | 49.28 | RCP | 12" |
| OUTLET PIPE | 49.28 | RCP | 12" |




**DESIGN NOTES:**
1. DESIGN LOADING:
   a. LOAD RATING = AASHTO HS-20
   b. MINIMUM COVER = 0.50' (152 mm); MAXIMUM COVER = 5.00' (1524 mm). CONTACT STORMTRAP FOR ADDITIONAL COVER OPTIONS.
   c. WATER TABLE AT OR BELOW OUTLET PIPE INVERT ELEVATION.
   d. NO LATERAL SURCHARGE FROM ADJACENT STRUCTURES SUCH AS VEGETATION, BUILDINGS, WALLS, OR FOUNDATIONS.
2. ENGINEER OF RECORD TO CONFIRM THE DESIGN LOADINGS MEET PROJECT REQUIREMENTS. CONTACT STORMTRAP FOR ALTERNATIVE DESIGN LOAD OPTIONS.

**GENERAL NOTES:**
1. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS, WEIGHTS, AND ACCESSORIES, PLEASE CONTACT YOUR STORMTRAP REPRESENTATIVE.
2. CONCRETE COMPONENTS SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM C478.
3. CONTRACTOR TO INSTALL THE STRUCTURE IN ACCORDANCE WITH ASTM C1231.
4. CONTRACTOR TO PROVIDE ALL LABOR AND EQUIPMENT REQUIRED TO OFFLOAD AND INSTALL UNIT.
5. CONTRACTOR TO PROVIDE AND INSTALL ALL PIPES, FRAMES, COVERS, HATCHES, AND RISERS UNLESS SPECIFIED OTHERWISE.
6. CONTRACTOR TO ADD JOINT SEALANT (PROVIDED BY STORMTRAP) BETWEEN ALL STRUCTURE SECTIONS.

DRAWINGS ARE FOR REFERENCE ONLY AND SHALL NOT BE USED FOR CONSTRUCTION PURPOSES.

StormSettler | StormTrap
STORMSETTLER 5 STANDARD DETAIL
DRAWN: CWN | DATE: 2/20/24 | SCALE: NTS | V1 | SHEET 1 OF 1
1287 WINDHAM PARKWAY ROMEOVILLE, IL 60446 P:815-941-4565 F:331-318-5347

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065
SPACECO INC.

FILENAME: 11624.03ST-2

DATE: 02/16/24

JOB NO. 11624.03

SHEET ST-2
23 OF 24

Attachment: Final Engineering Plans (2240 - 2266 N. Rand Road - FPD Distribution Use)

## MAINTENANCE & MONITORING REQUIREMENTS:

### TEMPORARY SOIL EROSION & SEDIMENT CONTROL

**1. SOIL EROSION AND SEDIMENT CONTROL**
THE CONTRACTOR WILL MAINTAIN ALL EROSION CONTROL MEASURES FOR THE DURATION OF THE CONSTRUCTION ACTIVITY. EROSION CONTROL MEASURES FOR THE PROPOSED DEVELOPMENT ARE INCLUDED IN THE PLAN SET. AT THE COMPLETION OF CONSTRUCTION, THE CONTRACTOR WILL COORDINATE THE TRANSFER OF MAINTENANCE RESPONSIBILITIES. MAINTENANCE ACTIVITIES WILL BE PERFORMED IN ACCORDANCE WITH THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, 1987.

EXCEPT AS PREVENTED BY INCLEMENT WEATHER CONDITIONS, ALL DISTURBED AREAS TO REMAIN ACTIVE FOR MORE THAN 14 DAYS WILL BE STABILIZED BY SEEDING, SODDING, MULCHING, COVERING, OR BY OTHER EQUIVALENT EROSION CONTROL MEASURES WITHIN SEVEN DAYS. PERMANENT SOIL STABILIZATION SHALL BE PROVIDED WITHIN SEVEN DAYS AFTER FINAL GRADING IS COMPLETED.

ALL TEMPORARY EROSION AND SEDIMENT CONTROL PRACTICES WILL BE REMOVED AND DISPOSED OF WITHIN THIRTY DAYS AFTER FINAL STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY PRACTICES ARE NO LONGER NEEDED.

### PERMANENT

**1. GENERAL**
REGULAR INSPECTIONS AND ROUTINE MAINTENANCE OF GENERAL AREAS SHALL BE PERFORMED ON A MONTHLY OR AS-NEEDED BASIS. SPECIFIC ITEMS OF CONCERN INCLUDE:
____ LITTER AND DEBRIS SHALL BE CONTROLLED
____ LANDSCAPED AREAS SHALL BE MAINTAINED WITH REGULAR MOWING AND RESTORED WITH APPROPRIATE SEEDING/VEGETATION AS NECESSARY
____ ACCUMULATED SEDIMENT SHALL BE DISPOSED OF PROPERLY, ALONG WITH ANY WASTES GENERATED DURING MAINTENANCE OPERATIONS
____ RIPRAP AREAS SHALL BE REPAIRED WITH THE ADDITION OF NEW RIPRAP, AS NECESSARY, OF SIMILAR SIZE AND SHAPE
____ ROADS SHALL BE SWEPT, VACUUMED AND/OR WASHED ON A REGULAR BASIS

**2. STORMWATER MANAGEMENT FACILITIES**
ALL COMPONENT OF THE STORMWATER MANAGEMENT FACILITIES SHALL BE CHECKED MONTHLY BETWEEN MARCH AND NOVEMBER AND MAINTAINED AS NECESSARY TO ENSURE PROPER PERFORMANCE. IT IS CRITICAL THAT ALL INFLOWS AND OUTFLOW TO THE DETENTION FACILITY ARE CLEAN AND PERFORMING AS DESIGNED. IN ADDITION, THE DESIGN VOLUME OF THE DETENTION FACILITY SHALL ALSO BE MAINTAINED. INSPECTIONS FOR THE FOLLOWING SPECIFIC ITEMS SHOULD BE CONDUCTED MONTHLY BETWEEN MARCH AND NOVEMBER:

SIDE SLOPES/EMBANKMENT/EMERGENCY OVERFLOW STRUCTURE
____ INSPECT EMBANKMENT FOR SETTLEMENT AND EROSION
____ REMOVE WOODY GROWTH FROM THE EMBANKMENT
____ ANY BREAKS, HIRE REGISTERED PROFESSIONAL ENGINEER FOR DESIGN RESOLUTION
____ SEED AND SOD ANY ERODED AREAS
____ SIGNS OF PIPING (LEAKAGE), REPAIR
____ SIGNS OF SEEPAGE OR WET SPOTS ON THE DOWNSTREAM DACE OF A BERM, MAY REQUIRED TOE DRAINS OR CHIMNEY DRAINS TO SOLVE PROBLEMS
____ STABILIZE EMERGENCY OVERFLOW STRUCTURE IF EROSION OBSERVED
____ REMOVE OBSTRUCTION BLOCKING EMERGENCY OVERFLOW SPILLWAY

VEGETATED AREAS
____ REGULA MOWING TO CONTROL VEGETATION, NO CUTTING OF NATIVE VEGETATION
____ NEED FOR PLANTING, RESEEDING OR SODDING, SUPPLEMENT ALTERNATIVE NATIVE VEGETATION IF A SIGNIFICANT POTION HAS BOT ESTABLISHED (50% OF THE SURFACE AREA). RESEED WITH ALTERNATIVE GRASS SPECIES IF ORIGINAL GRASS COVER HAS NOT SUCCESSFULLY ESTABLISHED.
____ EVIDENCE OF GRAZING, MOTORBIKES OR OTHER VEHICLES, REPAIR
____ CHECK FOR INVASIVE VEGETATION, REMOVE WHERE POSSIBLE
____ ALL VEGETATION MUST BE MAINTAINED PER THE APPROVED PLANTING PLAN

OUTLET CONTROL STRUCTURE
____ INSPECT RESTRICTOR AND REMOVE DEBRIS IF CLOGGED OR DISCHARGE REDUCED
____ REMOVE ACCUMULATED SEDIMENT AT OUTLET
____ SCOUR AND EROSION AT OUTLET, REPAIR AND RESEED
____ ANY ICE DAMAGE TO OUTLET OF PIPE, REPAIR IF NECESSARY
____ CONDITION OF TRASH TRACKS, REMOVE DEBRIS
____ OUTLET CHANNEL CONDITIONS DOWNSTREAM

ACCESS FOR MAINTENANCE EQUIPMENT
____ REMOVE ANY OBSTRUCTIONS PLACED IN MAINTENANCE EASEMENTS

SAFETY FEATURES
____ ACCESS CONTROLS TO HAZARDOUS AREAS
____ FENCES
____ LOOSE OR DAMAGED POSTS
____ LOOSE OR BROKEN WIRES
____ ACCUMULATED DEBRIS IN FENCES
____ CONDITIONS OF GATES
____ SIGNS

DETENTION VOLUME
____ INSPECT ALL STORMWATER DETENTION FACILITIES TO ENSURE THAT THE CONSTRUCTED VOLUME FOR DETENTION IS MAINTAINED. NO SEDIMENT, TOPSOIL OR OTHER DUMPING INTO THE FACILITY SHALL BE ALLOWED. SPECIFIC LOCATIONS IN THE STORMWATER MANAGEMENT SYSTEM, DESIGNED TO ACCUMULATE SEDIMENT, SHALL BE DREDGED AS NECESSARY TO PREVENT SEDIMENT FROM REACHING THE INVERT OFF ANY GRAVITY OUTLET PIPE.

**3. VOLUME CONTROL FACILITY**
ROUTINE INSPECTIONS AND MAINTENANCE OF VOLUME CONTROL FACILITIES SHALL BE PERFORMED BY THE OWNER ON A YEARLY OR AS-NEEDED BASIS. SPECIFIC ITEMS OF CONCERN INCLUDE:

____ FACILITY SHALL BE INSPECTED YEARLY USING THE MONITORING WELL TO VERIFY THE SYSTEM IS FUNCTIONING PROPERLY
____ SURFACE OF PERMEABLE PAVEMENT SHALL BE CLEANED WITH A LOW-PRESSURE POWER WASHER
____ ACCUMULATED SEDIMENT FROM SURFACE SHALL BE VACUUMED OUT AND DISPOSED OF PROPERLY
____ APPROPRIATE SIGNAGE SHALL BE REPAIRED IF DAMAGED OR ILLEGIBLE

**4. STORMWATER COLLECTION SYSTEM**
THE OWNER SHALL PERFORM MONTHLY INSPECTIONS OF ALL COMPONENTS OF THE STORMWATER COLLECTION SYSTEM. THE MONTHLY INSPECTIONS SHALL OCCUR BETWEEN MARCH AND NOVEMBER AND INCLUDE THE FOLLOWING SPECIFIC AREAS OF CONCERN:

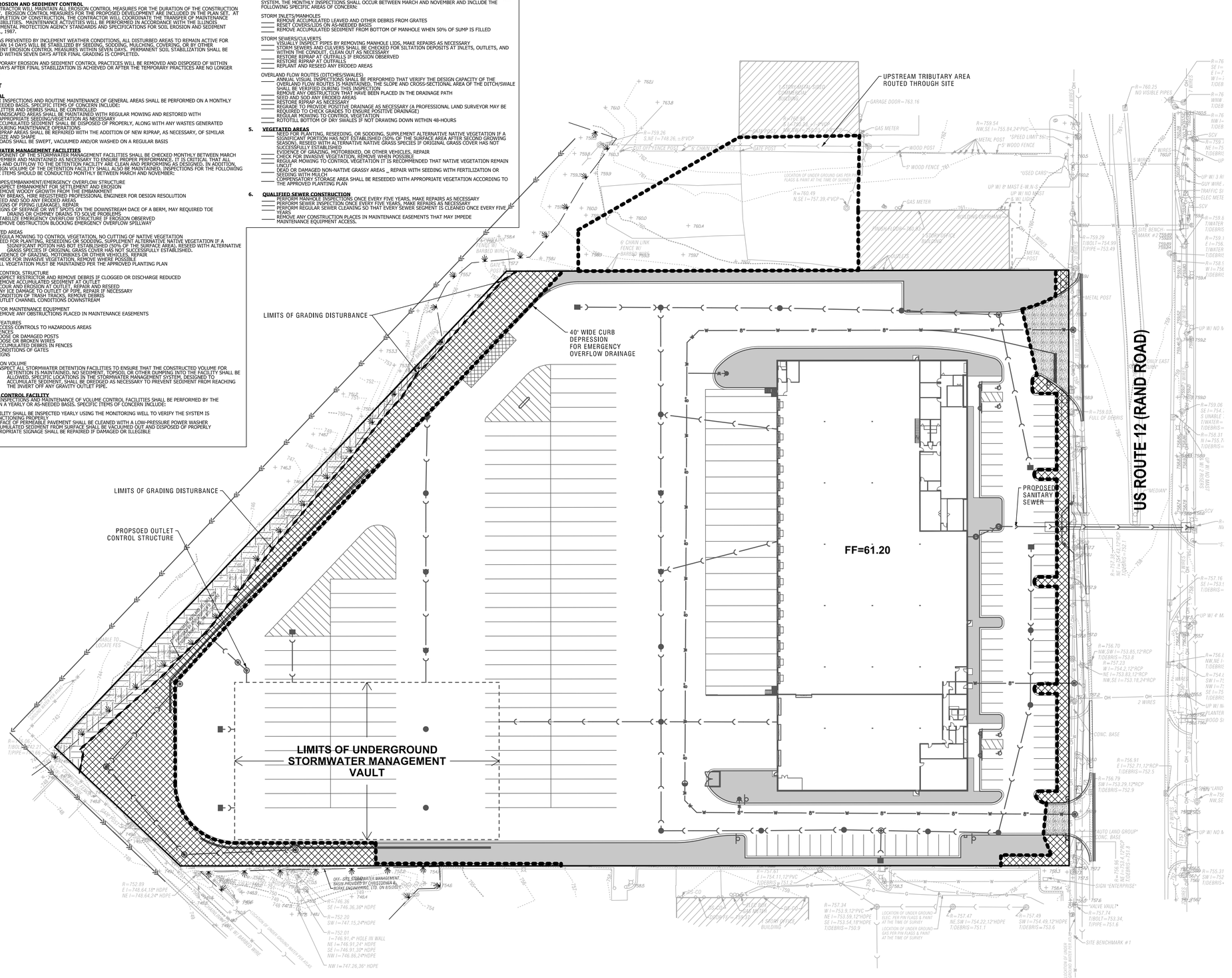
STORM INLETS/MANHOLES
____ REMOVE ACCUMULATED LEAVED AND OTHER DEBRIS FROM GRATES
____ RESET COVERS/LIDS ON AS-NEEDED BASIS
____ REMOVE ACCUMULATED SEDIMENT FROM BOTTOM OF MANHOLE WHEN 50% OF SUMP IS FILLED

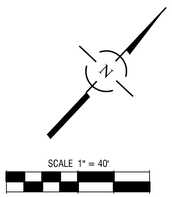
STORM SEWERS/CULVERTS
____ VISUALLY INSPECT PIPES BY REMOVING MANHOLE LIDS, MAKE REPAIRS AS NECESSARY
____ STORM SEWERS AND CULVERS SHALL BE CHECKED FOR SILTATION DEPOSITS AT INLETS, OUTLETS, AND WITHIN PIPES AND FLUSHED OUT AS NECESSARY
____ RESTORE RIPRAP AT OUTFALLS IF EROSION OBSERVED
____ REPLACE RIPRAP AT OUTFALLS
____ REPLANT AND RESEED ANY ERODED AREAS

OVERLAND FLOW ROUTES (DITCHES/SWALES)
____ ANNUAL VISUAL INSPECTIONS SHALL BE PERFORMED THAT VERIFY THE DESIGN CAPACITY OF THE OVERLAND FLOW ROUTES IS MAINTAINED. THE SLOPE AND CROSS-SECTIONAL AREA OF THE DITCH/SWALE SHALL BE VERIFIED DURING THIS INSPECTION
____ REMOVE ANY OBSTRUCTION THAT HAVE BEEN PLACED IN THE DRAINAGE PATH
____ SEED AND SOD ANY ERODED AREAS
____ RESTORE RIPRAP AS NECESSARY
____ REGRADE TO PROVIDE POSITIVE DRAINAGE AS NECESSARY (A PROFESSIONAL LAND SURVEYOR MAY BE REQUIRED TO CHECK GRADES TO ENSURE POSITIVE DRAINAGE)
____ REGULAR MOWING TO CONTROL VEGETATION
____ ROTOTILL BOTTOM OF DRY SWALES IF NOT DRAWING DOWN WITHIN 48-HOURS

**5. VEGETATED AREAS**
____ NEED FOR PLANTING, RESEEDING, OR SODDING, SUPPLEMENT ALTERNATIVE NATIVE VEGETATION IF A SIGNIFICANT PORTION HAS NOT ESTABLISHED (50% OF THE SURFACE AREA AFTER SECOND GROWING SEASON). RESEED WITH ALTERNATIVE NATIVE GRASS SPECIES IF ORIGINAL GRASS COVER HAS NOT SUCCESSFULLY ESTABLISHED
____ EVIDENCE OF GRAZING, MOTORBIKED, OR OTHER VEHICLES, REPAIR
____ CHECK FOR INVASIVE VEGETATION, REMOVE WHEN POSSIBLE
____ REGULAR MOWING TO CONTROL VEGETATION IT IS RECOMMENDED THAT NATIVE VEGETATION REMAIN UNCUT
____ DEAD OR DAMAGED NON-NATIVE GRASSY AREAS _ REPAIR WITH SEEDING WITH FERTILIZATION OR SEEDING WITH MULCH
____ COMPENSATORY STORAGE AREA SHALL BE RESEEDED WITH APPROPRIATE VEGETATION ACCORDING TO THE APPROVED PLANTING PLAN

**6. QUALIFIED SEWER CONSTRUCTION**
____ PERFORM MANHOLE INSPECTIONS ONCE EVERY FIVE YEARS, MAKE REPAIRS AS NECESSARY
____ PERFORM SEWER INSPECTION ONCE EVERY FIVE YEARS, MAKE REPAIRS AS NECESSARY
____ PERFORM REGULAR SEWER CLEANING SO THAT EVERY SEWER SEGMENT IS CLEANED ONCE EVERY FIVE YEARS
____ REMOVE ANY CONSTRUCTION PLACES IN MAINTENANCE EASEMENTS THAT MAY IMPEDE MAINTENANCE EQUIPMENT ACCESS.




### LOT SUMMARY:

PROPERTY ADDRESS: 2240 Rand Road, Palatine, IL 60074

PROPERTY INDEX NUMBERS: 02-02-101-005-0000; 02-02-101-013-0000; 02-02-101-014-0000; 02-02-101-019-0000; 02-02-101-020-0000; 02-02-101-021-0000

TOTAL PROPERTY OWNERSHIP = 7.90 AC

TOTAL DEVELOPMENT AREA = 7.71 AC

ON-SITE AREA TRIBUTARY TO DETENTION VAULT = 7.04 AC

UNRESTRICTED ON-SITE AREA = 0.67 AC
(100-YR 24-HR EVENT SUBTRACTED FROM ALLOW RELEASE)

UNDISTURBED AREA = 0.19 AC

UPSTREAM TRIBUTARY AREA ROUTED THOUGH SITE = 0.50 AC

### TIME OF CONCENTRATION CALCULATIONS:

USE 10-MIN FOR INDUSTRIAL

### DETENTION & RETENTION SUMMARY:

BOTTOM VC = 48.33

SHGWTE = 13.5' BELOW EXISTING FINISHED GRADE
ELEV. = 37.50 TO 43.50 AT VAULT LOCATION

DETENTION VOLUME PROVIDED = 3.25 AC-FT

DETENTION VOLUME REQUIRED = 3.00 AC-FT

RETENTION VOLUME PROVIDED = 0.55 AC-FT

RETENTION VOLUME REQUIRED = 0.54 AC-FT

### CURVE NUMBER CALCULATIONS:

CN TRIBUTARY TO BASINS = 96

CN UNRESTRICTED = 73

CN ADJUSTED = 89

### SYMBOL LEGEND

- PERVIOUS AREA
- IMPERVIOUS AREA
- UNRESTRICTED NATIVE PLANTINGS AREA TO BE SEEDED PER LANDSCAPE PLAN
- UNRESTRICTED IMPERVIOUS AREA
- UNDISTURBED AREA
- LIMITS OF GRADING DISTURBANCE
- LIMITS OF RESTRICTED AREA TRIBUTARY TO UNDERGROUND STORMWATER MANAGEMENT VAULT

### NOTES:

1. ALL STORM SEWERS SIZED FOR 100-YEAR STORMWATER RUNOFF EVENT.

| NO. | DATE | REMARKS |
|---|---|---|
| 1 | 02/21/24 | REVISIONS PER ARCHITECT AND STORMTRAP |

MWRD EXHIBIT R

# OREST EXPRESS
# NEW TRUCK TERMINAL
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 698-4060 Fax: (847) 698-4065
SPACECO INC.

FILENAME: 11624.03MWRD

DATE: 02/16/24

JOB NO. 11624.03

SHEET
EXH-R
24 OF 24

Attachment: Final Engineering Plans (2240 - 2266 N. Rand Road - FPD Distribution Use)

N:\Projects\11624\11624.03-JLL\ENG\11624.03MWRD.dgn Default User=gwagner

THOMAS ARCHITECTS
2800 S RIVER RD, #3
DES PLAINES, IL 600
O: 847.235.6815
THOMAS @ THOMASARCH.

## CODE INFORMATION

**CONSTRUCTION TYPE**
TYPE II-A (EXTERIOR PROTECTED)

**OCCUPANCY**
B - BUSINESS (OFFICE)
S-1 - STORAGE, MODERATE HAZARD

**GROSS FLOOR AREA**
42,598 SQ FEET (EXISTING, UNCHANGED)

**OCCUPANT LOAD**

| | | |
|---|---|---|
| OFFICE | 7000 SF / 100 = | 70 |
| STORAGE | 1054 SF / 300 = | 4 |
| MOTOR REPAIR | 10017 / 300 = | 34 |
| WAREHOUSE | 37842 SF / 500 = | 76 |
| TOTAL | | 184 |

**FIRE SUPPRESSION**
YES

**BUILDING HEIGHT (ACTUAL)**
30 FEET 0 INCHES

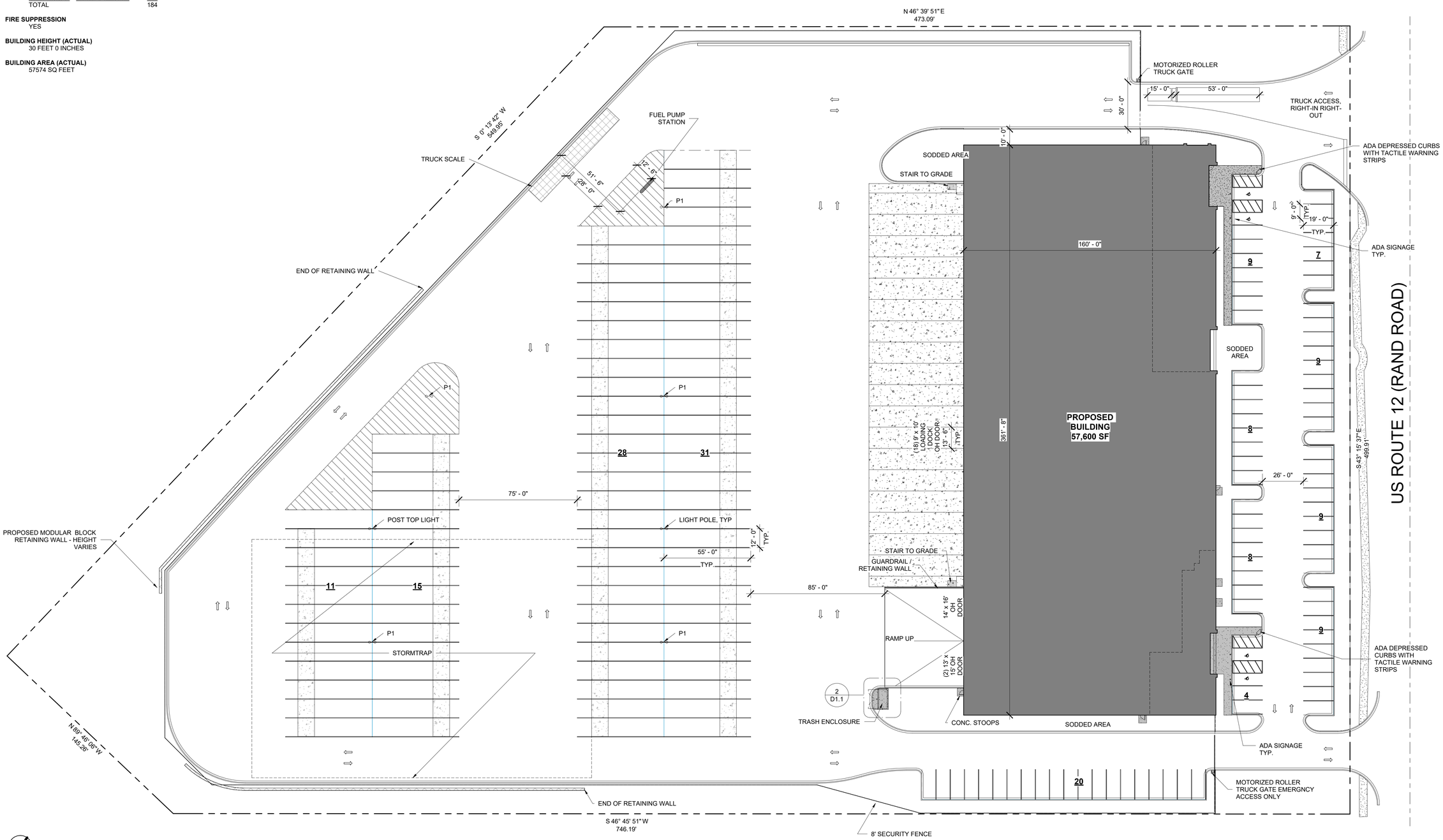
**BUILDING AREA (ACTUAL)**
57574 SQ FEET

## PARKING REQUIREMENTS

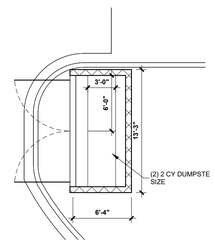
OFFICE (1 SPACE PER 300 SF GFA)
7,100 SF / 300 = 24 SPACES
WAREHOUSE (1 SPACE PER 1,000 SF GFA)
50,500 SF / 1,000 = 55 SPACES

TOTAL REQUIRED = 79 SPACES

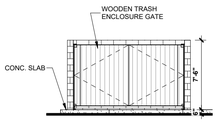
TOTAL PROVIDED = 85 SPACES
(4 ADA)



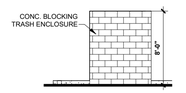

1 SITE PLAN
1" = 30'-0"



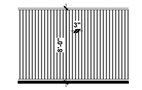

2 TRASH ENCLOSURE
1/8" = 1'-0"




3 TRASH ENCLOSURE FRONT
1/8" = 1'-0"




4 TRASH ENCLOSURE SIDE
1/8" = 1'-0"




5 8' SECURITY FENCE TYP.
1/8" = 1'-0"

| No. | Description | Date |
|---|---|---|
| 1 | PD AMENDMENT SUBMITTAL | 2.20.2024 |

Project Name and Address

**OREST EXPRESS**
NEW TRUCK TERMINAL

2240 N RAND RD
PALATINE, IL

Project No. 24-003

Description PRELIM SITE PLAN

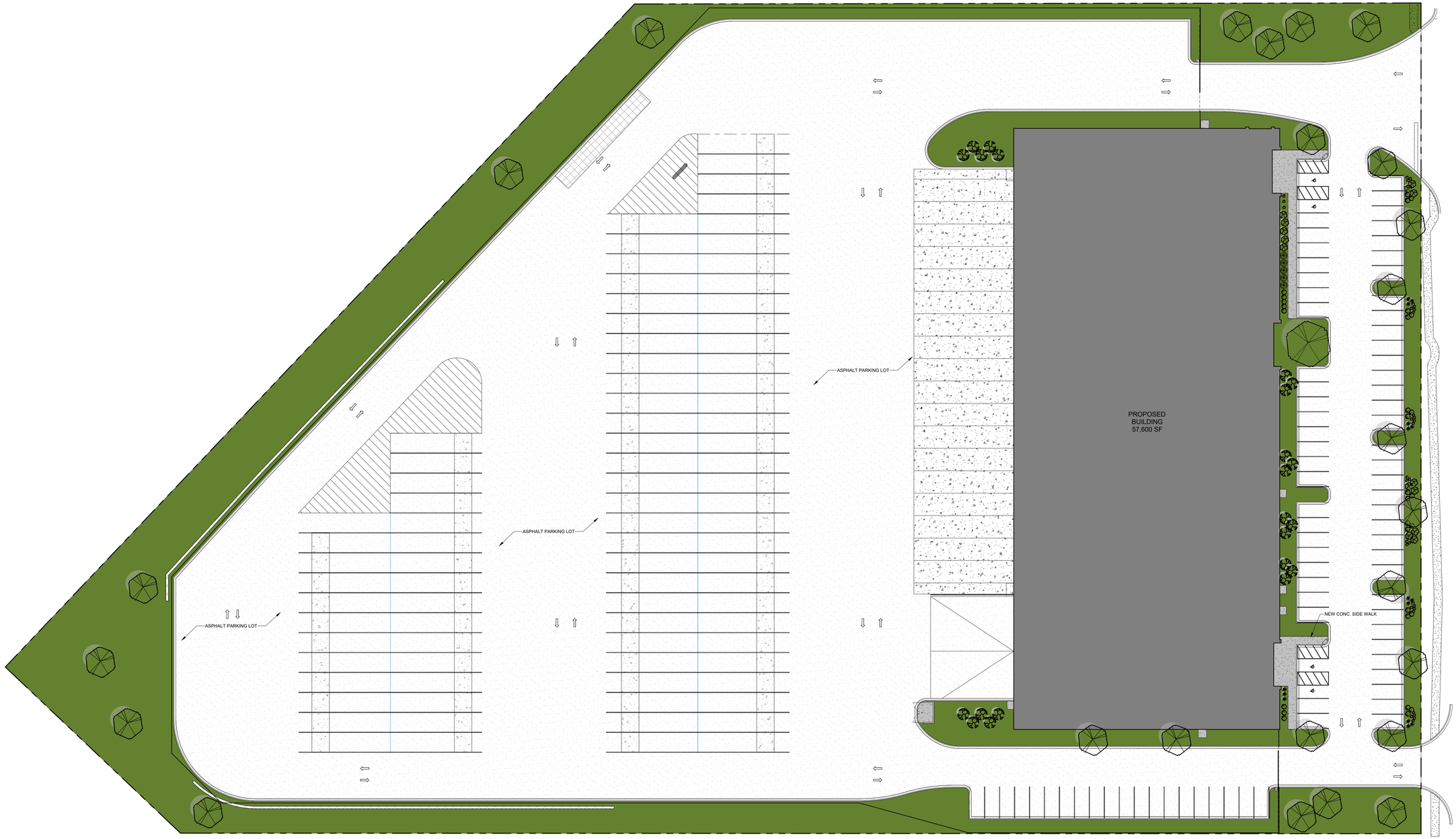
Sheet D1.1



Attachment: Final Architectural Plans (2240 - 2266 N. Rand Road - FPD Distribution Use)

C:\Users\Wenjie\Documents\24003 2240 N Rand_wenjie9HB9D.rvt

THOMAS ARCHITECTS
2800 S RIVER RD, #3
DES PLAINES, IL 600
O: 847.235.6815
THOMAS @ THOMASARCH.




1 SITE PLAN
1" = 30'-0"

| No. | Description | Date |
|---|---|---|
| 1 | PD AMENDMENT SUBMITTAL | 2.20.2024 |
| | | |
| | | |
| | | |
| | | |

Project Name and Address

**OREST EXPRESS**
NEW TRUCK TERMINAL

2240 N RAND RD
PALATINE, IL

Project No. 24-003

Description PRELIM SITE PLAM (COLOR)

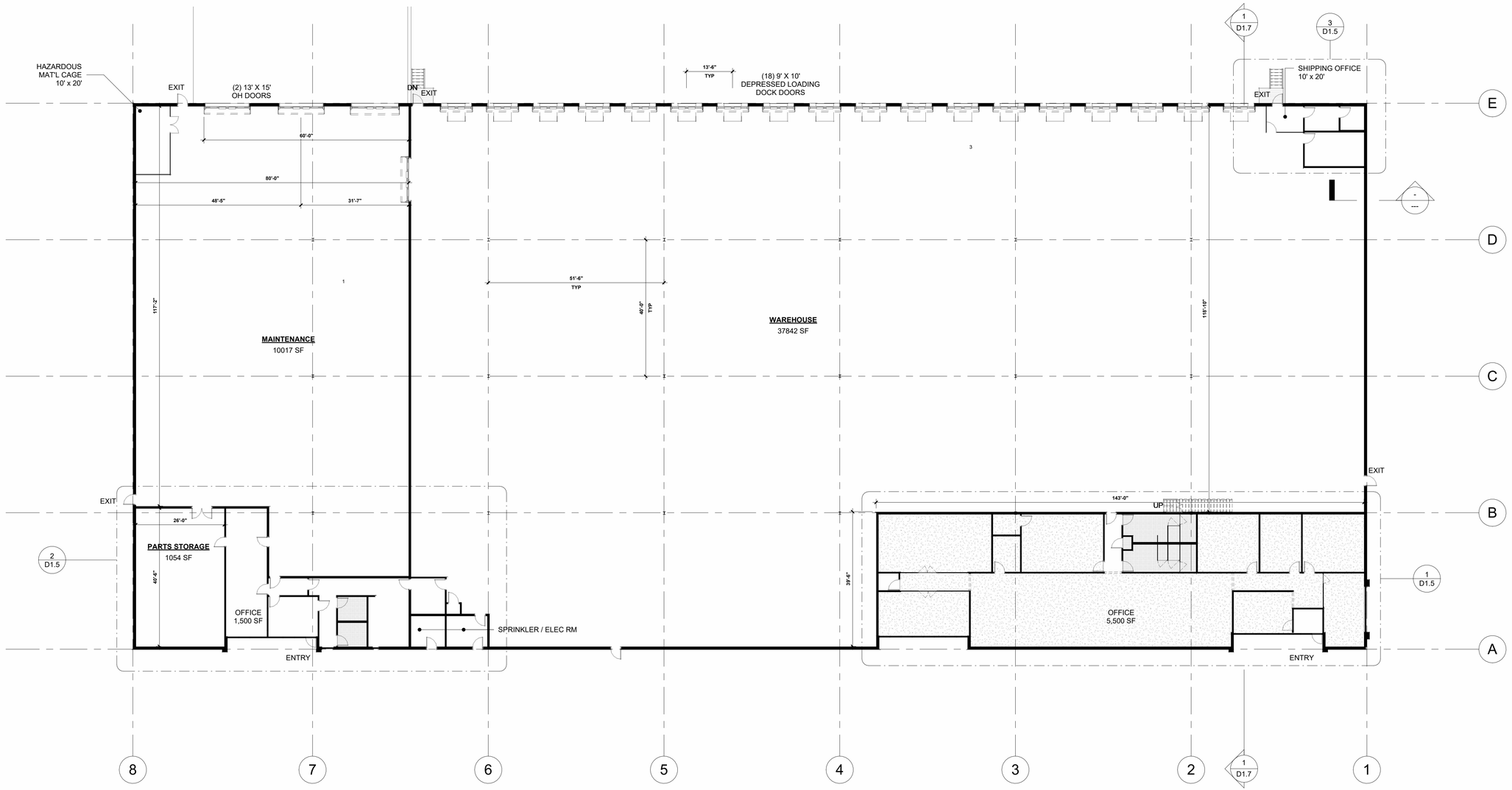
Sheet D1.2



Attachment: Final Architectural Plans (2240 - 2266 N. Rand Road - FPD Distribution Use)

C:\Users\Wenjie\Documents\24003 2240 N Rand_wenjie9HB9D.rvt

THOMAS ARCHITECTS
2800 S RIVER RD, #3
DES PLAINES, IL 600
O: 847.235.6815
THOMAS @ THOMASARCH.




1 1st FLOOR - PROPOSED
1/16" = 1'-0"

| No. | Description | Date |
|---|---|---|
| 1 | PD AMENDMENT SUBMITTAL | 2.20.2024 |

Project Name and Address

**OREST EXPRESS**
NEW TRUCK TERMINAL

2240 N RAND RD
PALATINE, IL

Project No. 24-003

Description PRELIM BUILDING PLAN

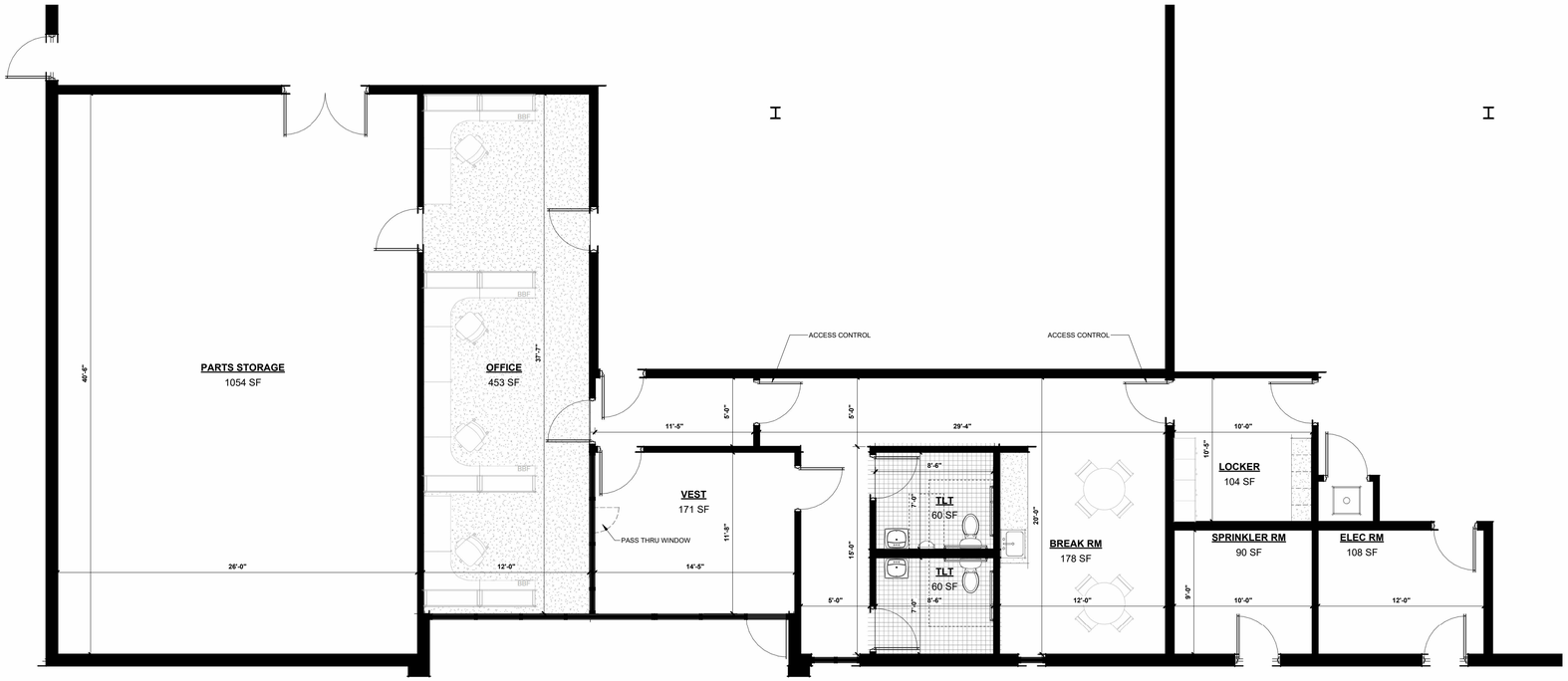
Sheet D1.4



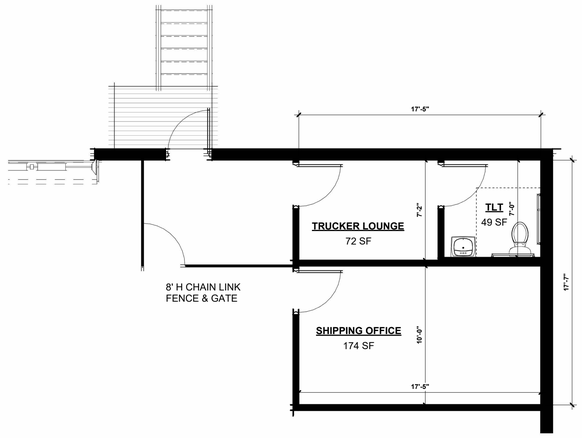
Attachment: Final Architectural Plans (2240 - 2266 N. Rand Road - FPD Distribution Use)

C:\Users\Wenjie\Documents\24003 2240 N Rand_wenjie9HB9D.rvt

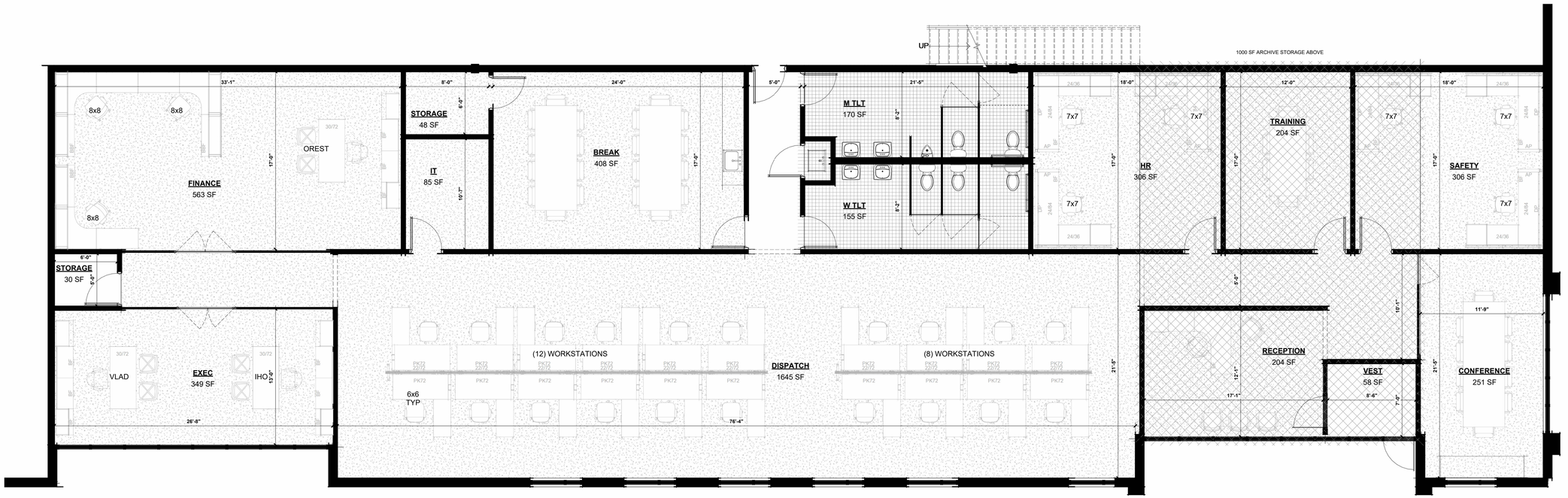
THOMAS ARCHITECTS
2800 S RIVER RD, #3
DES PLAINES, IL 600
O: 847.235.6815
THOMAS @ THOMASARCH.




2 ENLARGED PLAN - MAINTENANCE OFFICE
3/16" = 1'-0"




3 ENLAGRED PLAN - DRIVER WAITING ROOM
3/16" = 1'-0"




1 ENLARGED PLAN - TERMINAL OFFICE
3/16" = 1'-0"

| No. | Description | Date |
|---|---|---|
| 1 | PD AMENDMENT SUBMITTAL | 2.20.2024 |

Project Name and Address

**OREST EXPRESS**
NEW TRUCK TERMINAL

2240 N RAND RD
PALATINE, IL

Project No. 24-003

Description PRELIM ENLARGED PLANS

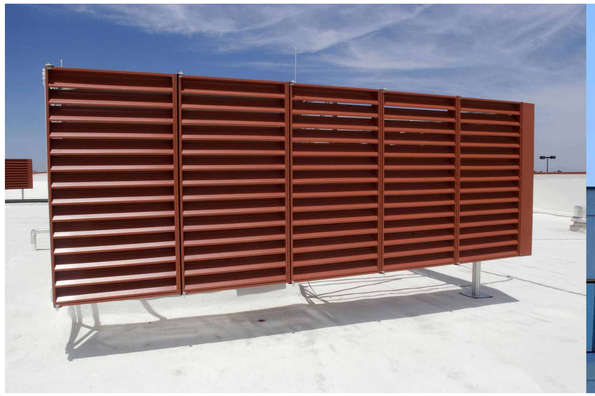
Sheet D1.5



Attachment: Final Architectural Plans (2240 - 2266 N. Rand Road - FPD Distribution Use)

C:\Users\Wenjie\Documents\24003 2240 N Rand_wenjie9HB9D.rvt

THOMAS ARCHITECTS
2800 S RIVER RD, #3
DES PLAINES, IL 600
O: 847.235.6815
THOMAS @ THOMASARCH.



EXAMPLE OF RTU SCREEN

STURDISTRUCT ROOFTOP FRAMING SYSTEM
FOR LOUVERED EQUIPMENT SCREENS

MIN. LOUVER HEIGHT 24"
MAX. LOUVER HEIGHT 96"

POSTS AND GIRTS - 3" X 3" MODULAR ALUMINUM TUBE FRAMING

KICKER AND RACKING BRACES - 1-1/2" X 1-1/2" MODULAR ALUMINUM TUBE FRAMING

FASTENERS - STAINLESS STEEL TEK SCREWS, 5/16" CARRIAGE BOLTS, NUTS, AND WASHERS

DESIGNED FOR 30 PSF WIND LOAD

POSTS SPACED AT 96" MAX. ON CENTER

GIRTS SPACED AT 60" MAX. ON CENTER

OPTIONS:

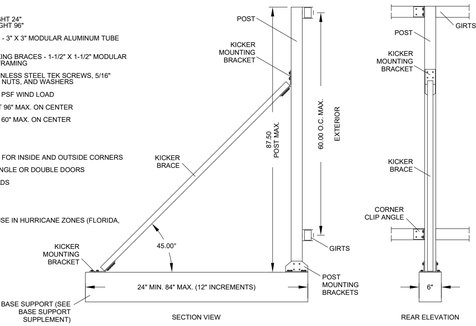
CONFIGURATIONS FOR INSIDE AND OUTSIDE CORNERS

OPENINGS FOR SINGLE OR DOUBLE DOORS

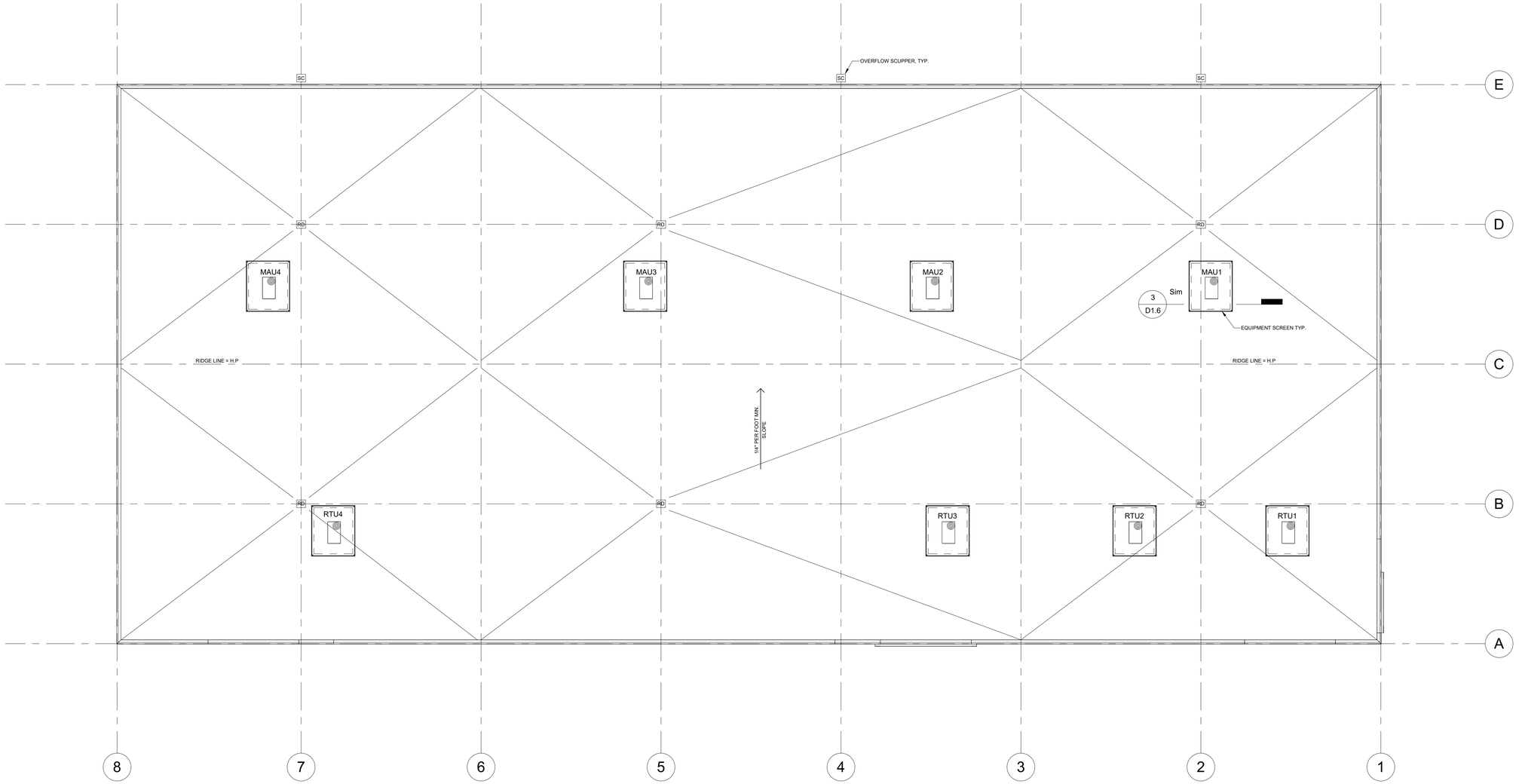
HIGHER WIND LOADS

NOTE:

NOT RATED FOR USE IN HURRICANE ZONES (FLORIDA, ETC)




3 RTU SCREEN
12" = 1'-0"




1 ROOF - PROPOSED
1/16" = 1'-0"

| No. | Description | Date |
|---|---|---|
| 1 | PD AMENDMENT SUBMITTAL | 2.20.2024 |

Project Name and Address

**OREST EXPRESS**
NEW TRUCK TERMINAL

2240 N RAND RD
PALATINE, IL

Project No. 24-003

Description PRELIM ROOF PLAN

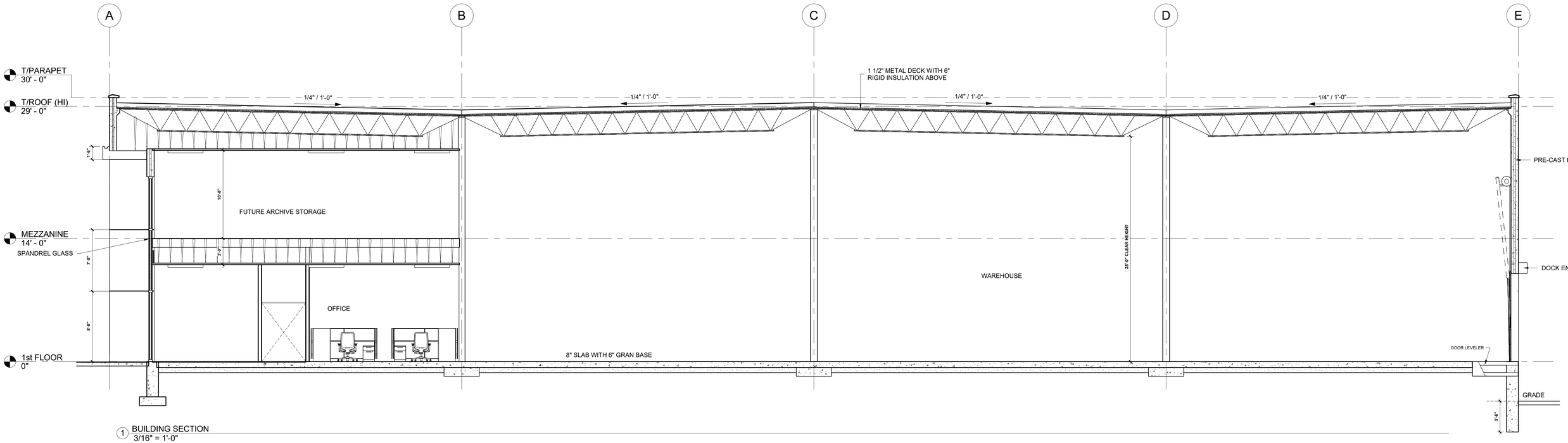
Sheet D1.6



Attachment: Final Architectural Plans (2240 - 2266 N. Rand Road - FPD Distribution Use)

C:\Users\Wenjie\Documents\24003 2240 N Rand_wenjie9HB9D.rvt

THOMAS ARCHITECTS
2800 S RIVER RD, #3
DES PLAINES, IL 600
O: 847.235.6815
THOMAS @ THOMASARCH.




1 BUILDING SECTION
3/16" = 1'-0"

| No. | Description | Date |
|---|---|---|
| 1 | PD AMENDMENT SUBMITTAL | 2.20.2024 |

Project Name and Address

**OREST EXPRESS**
NEW TRUCK TERMINAL

2240 N RAND RD
PALATINE, IL

Project No. 24-003

Description BUILDING SECTIONS

Sheet D1.7

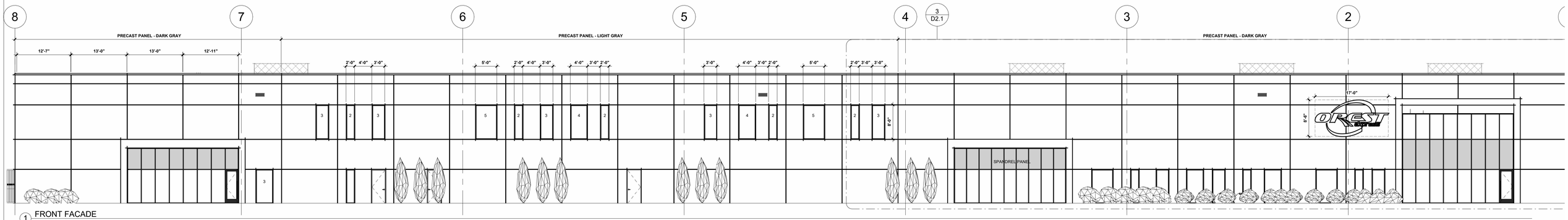


Attachment: Final Architectural Plans (2240 - 2266 N. Rand Road - FPD Distribution Use)

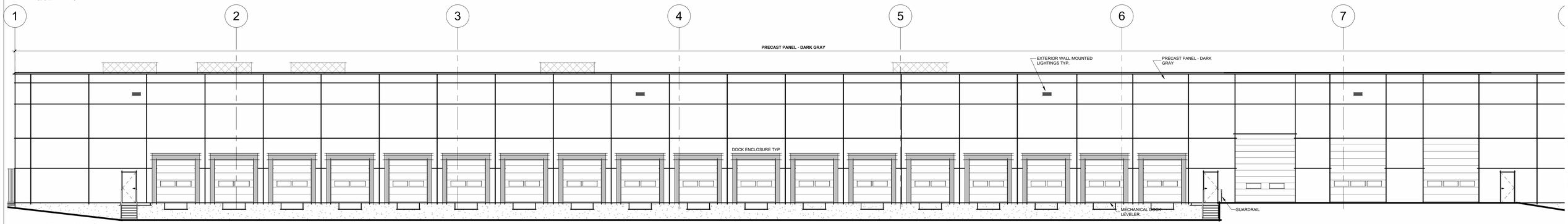
C:\Users\Wenjie\Documents\24003 2240 N Rand_wenjie9HB9D.rvt

THOMAS ARCHITECTS
2800 S RIVER RD, #3
DES PLAINES, IL 600
O: 847.235.6815
THOMAS @ THOMASARCH.

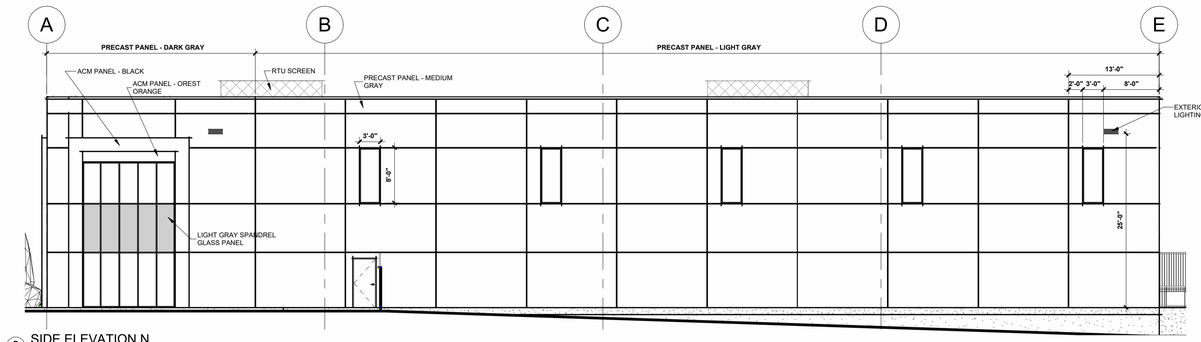




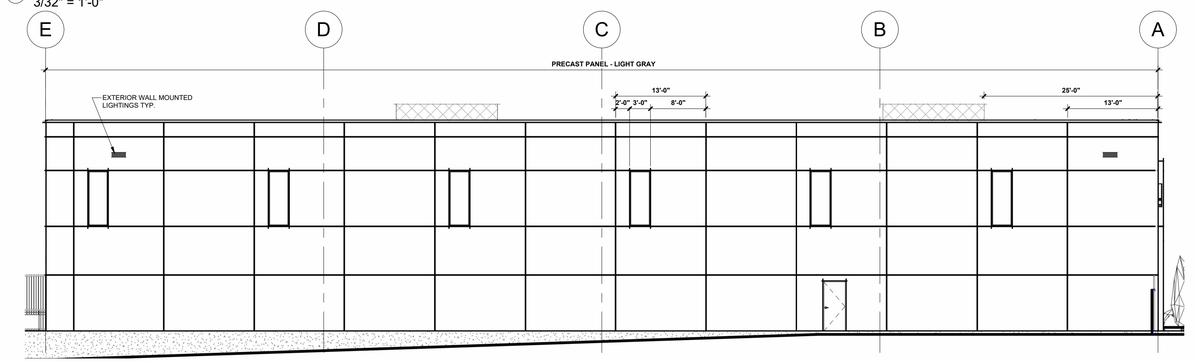

1 FRONT FACADE
3/32" = 1'-0"




2 REAR ELEVATION
3/32" = 1'-0"




3 SIDE ELEVATION N
3/32" = 1'-0"




4 SIDE ELEVATION S
3/32" = 1'-0"

| No. | Description | Date |
|---|---|---|
| 1 | PD AMENDMENT SUBMITTAL | 2.20.2024 |

Project Name and Address

**OREST EXPRESS**
NEW TRUCK TERMINAL

2240 N RAND RD
PALATINE, IL

Project No. 24-003

Description ELEVATIONS

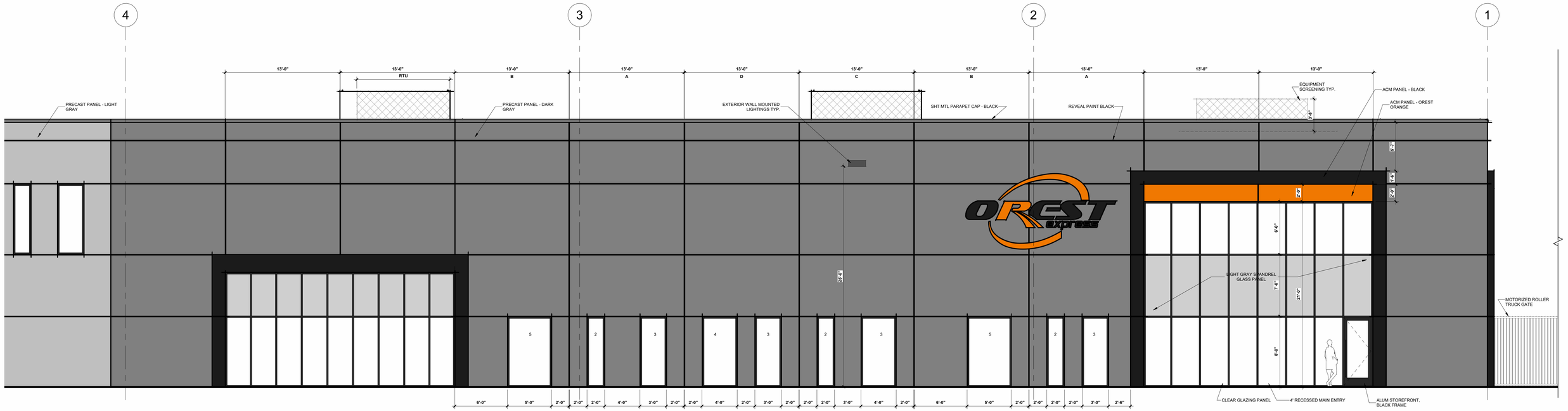
Sheet D2.0



Attachment: Final Architectural Plans (2240 - 2266 N. Rand Road - FPD Distribution Use)

C:\Users\Wenjie\Documents\24003 2240 N Rand_wenjieHB9D.rvt

THOMAS ARCHITECTS
2800 S RIVER RD, #3
DES PLAINES, IL 600
O: 847.235.6815
THOMAS @ THOMASARCH.




3 FRONT FACADE - MAIN ENTRY
3/16" = 1'-0"

| No. | Description | Date |
|---|---|---|
| 1 | PD AMENDMENT SUBMITTAL | 2.20.2024 |
| | | |
| | | |
| | | |
| | | |

Project Name and Address

**OREST EXPRESS**
NEW TRUCK TERMINAL

2240 N RAND RD
PALATINE, IL

Project No. 24-003

Description ELEVATIONS

Sheet D2.1



Attachment: Final Architectural Plans (2240 - 2266 N. Rand Road - FPD Distribution Use)

C:\Users\Wenjie\Documents\24003 2240 N Rand_wenjie9HB9D.rvt

THOMAS ARCHITECTS
2800 S RIVER RD, #3
DES PLAINES, IL 600
O: 847.235.6815
THOMAS @ THOMASARCH.

CONCEPTUAL RENDERING

| No. | Description | Date |
|---|---|---|
| 1 | PD AMENDMENT SUBMITTAL | 2.20.2024 |
| | | |
| | | |
| | | |
| | | |

Project Name and Address

**OREST EXPRESS**
NEW TRUCK TERMINAL

2240 N RAND RD
PALATINE, IL

Project No. 24-003

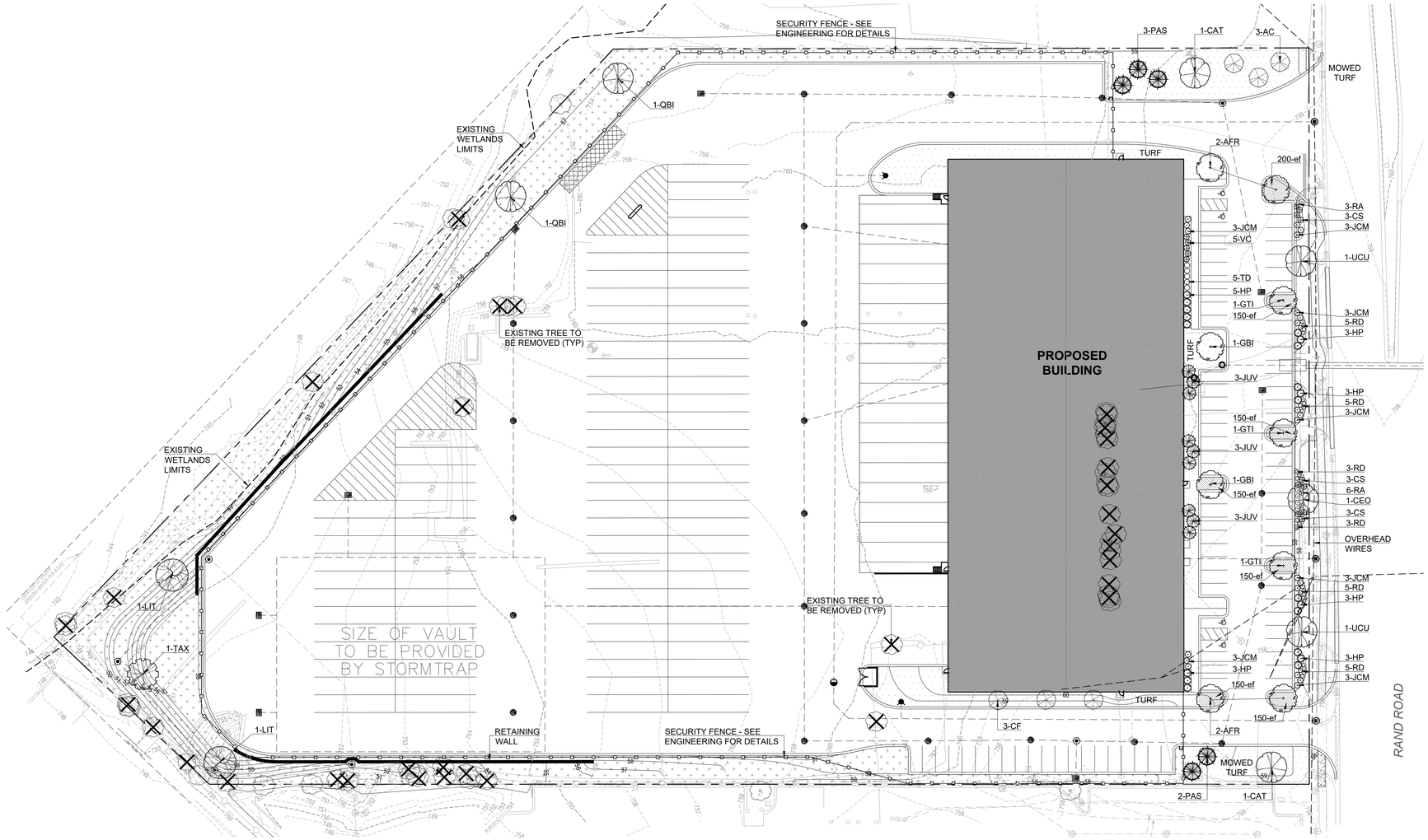
Description CONCEPTUAL RENDERING

Sheet D2.2



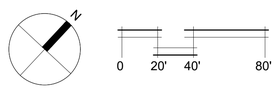
Attachment: Final Architectural Plans (2240 - 2266 N. Rand Road - FPD Distribution Use)

C:\Users\Wenjie\Documents\24003 2240 N Rand_wenjie9HB9D.rvt




# PRELIMINARY LANDSCAPE PLAN

SCALE: 1" = 40'-0"




**LANDSCAPE REQUIREMENT SUMMARY**

| | |
|---|---|
| PARKING SUMMARY | |
| PASSENGER PARKING | 83 |
| TRAILER STALLS | 104 |
| TOTAL PARKING SPACES | 187 |
| PARKING LOT TREES REQUIRED (1:10) | 19 |
| PARKING LOT TREES PROVIDED | 19 |

**SEED MIX & GROUND TREATMENT KEY**

OPEN AREAS - NATIVE NO MOW

All open areas not including detention to be planted with low profile prairie grass mix as specified on planting schedule. See sheet L2.1 for preferred installation method.

TURF GRASS - MOWED LAWN

All areas of restoration, not designated to be planted or mulched are to be seeded with standard turf grass seed and covered with an erosion control blanket.

**Master Plant List**

| Symbol | Quantity | Botanical Name | Common Name | Size | Origin | Notes |
|---|---|---|---|---|---|---|
| **Shade Trees** | | | | | | |
| AFR | 4 | ACER X FREEMANII 'AUTUMN BLAZE' | AUTUMN BLAZE FREEMAN MAPLE | 3" BB | | MOIST |
| CAT | 2 | CATALPA SPECIOSA | NORTHERN CATALPA | 3" BB | NATIVE | |
| CEO | 1 | CELTUS OCCIDENTALIS | HACKBERRY | 3" BB | | URBAN, MOIST |
| GBI | 2 | GINKGO BILOBA | GINKGO | 3" BB | | URBAN, MALE SPEC. ONLY |
| GTI | 3 | GLEDITSIA TRIACANTHOS F. INERMIS | THORNLESS HONEYLOCUST | 3" BB | | URBAN, MOIST |
| LIT | 2 | LIRODENDRON TULIPIFERA | TULIP TREE | 3" BB | NATIVE | MOIST |
| QBI | 2 | QUERCUS BICOLOR | SWAMP WHITE OAK | 3" BB | NATIVE | |
| TAX | 1 | TAXODIUM DISTICHUM | BALD CYPRESS | 3" BB | | URBAN, MOIST |
| UCU | 2 | ULMUS CULTIVAR 'ACCOLADE' 'TRIUMPH' | ACCOLADE ELM | 3" BB | | URBAN |
| | | | | | | |
| **Evergreen Trees** | | | | | | |
| JUV | 9 | JUNIPERUS VIRGINIANA | EASTERN RED CEDAR | 8' BB | NATIVE | |
| PAS | 5 | PICEA AIBES | NORWAY SPRUCE | 8' BB | | |
| | | | | | | |
| **Ornamental Trees** | | | | | | |
| AC | 3 | AMELANCHIER CANADENSIS | SHADBLOW SERVICEBERRY | 6' BB | NATIVE | MOIST SOIL |
| COF | 3 | CORNUS FLORIDA | FLOWERING DOGWOOD | 6' BB | | |
| | | | | | | |
| **Evergreen Shrubs** | | | | | | |
| JCM | 21 | JUNIPERUS CHINENSIS 'MINT JULIP' | MINT JULIP SPREADING JUNIPER | 24" BB | | |
| TD | 5 | TAXUS x MEDIA 'DENSII' | DENSE YEW | 24" BB | | |
| | | | | | | |
| **Deciduous Shrubs** | | | | | | |
| CS | 9 | CORNUS SERICEA 'ISANTI' | ISANTI RED TWIG DOGWOOD | 24" BB | NATIVE | |
| HP | 17 | HYDRANGEA PANICULATA 'TARDIVA' | TARDIVA HYDRANGEA | 36" BB | | |
| RA | 9 | RHUS AROMATICA 'GRO LOW' | GRO LOW SUMAC | 5 GAL | NATIVE | |
| RD | 26 | ROSA 'DRIFT SWEET' | GROUNDCOVER ROSE | 2 GAL | | PINK |
| VC | 5 | VIBURNUM CARLESII 'COMPACTUM' | DWARF KOREANSPICE VIBURNUM | 36" BB | | |
| | | | | | | |
| **Groundcover** | | | | | | |
| ef | 1100 | EUONYMOUS FORTUNEI 'COLORATUS' | PURPLELEAF WINTERCREEPER | 3" POTS | | |

Kathryn Talty
landscape architecture
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REGISTERED LANDSCAPE ARCHITECT
KATHRYN MAXWELL TALTY
157-0015
STATE OF ILLINOIS

| no. | revision description | initial | date |
|---|---|---|---|
| 1 | ISSUED FOR REVIEW | KMT | 02-12-24 |
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2240-2266 RAND ROAD
PALATINE, IL

PRELIMINARY LANDSCAPE PLAN
LANDSCAPE REQUIREMENTS
GROUND TREATMENT KEY
MASTER PLANT LIST

date: 02-09-24
drawn DJ
checked KMT

job no. 24070

sheet no. L1.0

Attachment: Landscape Plan (2240 - 2266 N. Rand Road - FPD Distribution Use)

# LANDSCAPE MAINTENANCE SPECIFICATIONS

THE CONTRACTOR SHALL PROVIDE AS A SEPARATE BID, MAINTENANCE FOR A PERIOD OF 1 YEAR AFTER FINAL ACCEPTANCE OF THE PROJECT LANDSCAPING. THE CONTRACTOR MUST BE ABLE TO PROVIDE CONTINUED MAINTENANCE IF REQUESTED BY THE OWNER OR PROVIDE THE NAME OF A REPUTABLE LANDSCAPE CONTRACTOR WHO CAN PROVIDE MAINTENANCE.

**STANDARDS**

ALL LANDSCAPE MAINTENANCE SERVICES SHALL BE PERFORMED BY TRAINED PERSONNEL USING CURRENT, ACCEPTABLE HORTICULTURAL PRACTICES.

ALL WORK SHALL BE PERFORMED IN A MANNER THAT MAINTAINS THE ORIGINAL INTENT OF THE LANDSCAPE DESIGN.

ALL CHEMICAL APPLICATIONS SHALL BE PERFORMED IN ACCORDANCE WITH CURRENT COUNTY, STATE AND FEDERAL LAWS, USING EPA REGISTERED MATERIALS AND METHODS OF APPLICATION. THESE APPLICATIONS SHALL BE PERFORMED UNDER THE SUPERVISION OF A LICENSED CERTIFIED APPLICATOR.

**APPROVALS**

ANY WORK PERFORMED IN ADDITION TO THAT WHICH IS OUTLINED IN THE CONTRACT SHALL ONLY BE DONE UPON WRITTEN APPROVAL BY THE OWNER'S REPRESENTATIVE.

ALL SEASONAL COLOR SELECTIONS SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO ORDERING AND INSTALLATION.

**SOIL TESTING**

THE MAINTENANCE CONTRACTOR SHALL PERFORM SOIL TESTS AS NEEDED TO IDENTIFY ANY IMBALANCES OR DEFICIENCIES CAUSING PLANT MATERIAL DECLINE. THE OWNER SHALL BE NOTIFIED OF THE RECOMMENDATION FOR APPROVAL, AND THE NECESSARY CORRECTIONS MADE AT AN ADDITIONAL COST TO THE OWNER.

ACCEPTABLE SOIL TEST RESULTS:

| | LANDSCAPE TREES & SHRUBS | TURF |
|---|---|---|
| PH RANGE | 5.0-7.0 | 6.0-7.0 |
| ORGANIC MATTER | >1.5% | >2.5% |
| MAGNESIUM (MG) | 100+LBS./ACRE | 100+LBS./ACRE |
| PHOSPHORUS (P2O5) | 150+LBS./ACRE | 150+LBS./ACRE |
| POTASSIUM (K2O) | 120+LBS./ACRE | 120+LBS./ACRE |
| SOLUBLE SALTS | NOT TO EXCEED 900PPM/1.9 MMHOS/CM | NOT TO EXCEED 750PPM/0.75 MMHOS/CM |
| | IN SOIL; NOT TO EXCEED 1400 PPM/2.5 | IN SOIL; NOT TO EXCEED 2000 PPM/2.0 |
| | MMHOS/CM IN HIGH ORGANIC MIX | MMHOS/CM IN HIGH ORGANIC MIX |

FOR UNUSUAL SOIL CONDITIONS, THE FOLLOWING OPTIONAL TESTS ARE RECOMMENDED WITH LEVELS NOT TO EXCEED:

| | |
|---|---|
| BORON | 3 POUNDS PER ACRE |
| MANGANESE | 50 POUNDS PER ACRE |
| POTASSIUM (K2O) | 450 POUNDS PER ACRE |
| SODIUM | 20 POUNDS PER ACRE |

**WORKMANSHIP**

DURING LANDSCAPE MAINTENANCE OPERATIONS, ALL AREAS SHALL BE KEPT NEAT AND CLEAN. PRECAUTIONS SHALL BE TAKEN TO AVOID DAMAGE TO EXISTING STRUCTURES. ALL WORK SHALL BE PERFORMED IN A SAFE MANNER TO THE OPERATORS, THE OCCUPANTS AND ANY PEDESTRIANS.

UPON COMPLETION OF MAINTENANCE OPERATIONS, ALL DEBRIS AND WASTE MATERIAL SHALL BE CLEANED UP AND REMOVED FROM THE SITE, UNLESS PROVISIONS HAVE BEEN GRANTED BY THE OWNER TO USE ON-SITE TRASH RECEPTACLES. ANY DAMAGE TO THE LANDSCAPE, STRUCTURES, OR IRRIGATION SYSTEMS CAUSED BY THE MAINTENANCE CONTRACTOR, SHALL BE REPAIRED BY THE MAINTENANCE CONTRACTOR WITHOUT CHARGE TO THE OWNER.

## TURF

**GENERAL CLEAN UP**

PRIOR TO MOWING, ALL TRASH, STICKS, AND OTHER UNWANTED DEBRIS SHALL BE REMOVED FROM LAWNS, PLANT BEDS, AND PAVED AREAS.

**MOWING**

TURF GRASSES, INCLUDING BLUE GRASS, TALL FESCUE, PERENNIAL RYEGRASS, ETC., SHALL BE MAINTAINED AT A HEIGHT OF 2" TO 3" IN SPRING AND FALL. FROM JUNE THROUGH SEPTEMBER, MOWING HEIGHT SHALL BE MAINTAINED AT NO LESS THAN 3".

THE MOWING OPERATION INCLUDES TRIMMING AROUND ALL OBSTACLES, RAKING EXCESSIVE GRASS CLIPPINGS AND REMOVING DEBRIS FROM WALKS, CURBS, AND PARKING AREAS. CAUTION: MECHANICAL WEEDERS SHOULD NOT BE USED AROUND TREES BECAUSE OF POTENTIAL DAMAGE TO THE BARK.

**EDGING**

EDGING OF ALL SIDEWALKS, CURBS AND OTHER PAVED AREAS SHALL BE PERFORMED ONCE EVERY OTHER MOWING. DEBRIS FROM THE EDGING OPERATIONS SHALL BE REMOVED AND THE AREAS SWEPT CLEAN. CAUTION SHALL BE USED TO AVOID FLYING DEBRIS.

**FERTILIZING**

SEASONALLY STEPPED FERTILIZER SHALL BE APPLIED IN AREAS BASED ON THE EXISTING TURF SPECIES.

**LAWN WEED CONTROL: HERBICIDES**

SELECTION AND PROPER USE OF HERBICIDES SHALL BE THE LANDSCAPE CONTRACTOR'S RESPONSIBILITY. ALL CHEMICAL APPLICATIONS SHALL BE PERFORMED UNDER THE SUPERVISION OF A LICENSED CERTIFIED APPLICATOR. READ THE LABEL PRIOR TO APPLYING ANY CHEMICAL.

**INSECT & DISEASE CONTROL FOR TURF**

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MONITORING THE SITE CONDITIONS ON EACH VISIT TO DETERMINE IF ANY INSECT PEST OR DISEASE PROBLEMS EXIST. THE CONTRACTOR SHALL IDENTIFY THE INSECT PEST OR DISEASE, AS WELL AS THE HOST PLANT, AND THEN CONSULT THE MOST CURRENT EDITION OF THE COOPERATIVE EXTENSION SERVICE'S "COMMERCIAL INSECTICIDE RECOMMENDATION FOR TURF" FOR CONTROL. THE LICENSED APPLICATOR SHALL BE FAMILIAR WITH THE LABEL PROVIDED FOR THE SELECTED PRODUCT PRIOR TO APPLICATION.

INSPECTION AND TREATMENT TO CONTROL INSECT PESTS SHALL BE INCLUDED IN THE CONTRACT PRICE.

## TREES, SHRUBS, & GROUND COVER

**PRUNING**

ALL ORNAMENTAL TREES, SHRUBS AND GROUND COVER SHALL BE PRUNED WHEN APPROPRIATE TO REMOVE DEAD OR DAMAGED BRANCHES, DEVELOP THE NATURAL SHAPES. DO NOT SHEAR TREES OR SHRUBS. IF PREVIOUS MAINTENANCE PRACTICE HAS BEEN TO SHEAR AND BALL, THEN A NATURAL SHAPE WILL BE RESTORED GRADUALLY.

PRUNING GUIDELINES:

1. PRUNE PLANTS THAT FLOWER BEFORE THE END OF JUNE (SPRING BLOOMING) IMMEDIATELY AFTER FLOWERING. FLOWER BUDS DEVELOP DURING THE PREVIOUS GROWING SEASON. FALL, WINTER OR SPRING PRUNING WOULD REDUCE THE SPRING FLOWERING DISPLAY.
2. PRUNE PLANTS THAT FLOWER IN JULY – SEPTEMBER (SUMMER OR AUTUMN BLOOMING) IN WINTER OR SPRING BEFORE NEW GROWTH BEGINS, SINCE THESE PLANTS DEVELOP FLOWERS ON NEW GROWTH.
3. DELAY PRUNING PLANTS GROWN FOR ORNAMENTAL FRUITS, SUCH AS COTONEASTERS AND VIBURNUMS.
4. HOLLIES AND OTHER EVERGREENS MAY BE PRUNED DURING WINTER IN ORDER TO USE THEIR BRANCHES FOR SEASONAL DECORATION. HOWEVER, SEVERE PRUNING OF EVERGREENS SHOULD BE DONE IN EARLY SPRING ONLY.
5. BROADLEAF EVERGREEN SHRUBS SHALL BE HAND-PRUNED TO MAINTAIN THEIR NATURAL APPEARANCE AFTER THE NEW GROWTH HARDENS OFF.
6. HEDGES OR SHRUBS THAT REQUIRE SHEARING TO MAINTAIN A FORMAL APPEARANCE SHALL BE PRUNED AS REQUIRED. DEAD WOOD SHALL BE REMOVED FROM SHEARED PLANTS BEFORE THE FIRST SHEARING OF THE SEASON.
7. CONIFERS SHALL BE PRUNED, IF REQUIRED, ACCORDING TO THEIR GENUS.
   A. YEWS, JUNIPERS, HEMLOCKS AND ARBORVITAE MAY BE PRUNED AFTER NEW GROWTH HAS HARDENED OFF IN LATE SUMMER. IF SEVERE PRUNING IS NECESSARY, IT MUST BE DONE IN EARLY SPRING.
   B. FIRS AND SPRUCES MAY BE LIGHTLY PRUNED IN LATE SUMMER, FALL, OR WINTER AFTER COMPLETING GROWTH. LEAVE SIDE BUDS. NEVER CUT CENTRAL LEADER.
   C. PINES MAY BE LIGHTLY PRUNED IN EARLY JUNE BY REDUCING CANDLES.
8. GROUNDCOVER SHALL BE EDGED AND PRUNED AS NEEDED TO CONTAIN IT WITHIN ITS BORDERS.
9. THINNING: REMOVE BRANCHES AND WATER SPROUTS BY CUTTING THEM BACK TO THEIR POINT OF ORIGIN ON PARENT STEMS. THIS METHOD RESULTS IN A MORE OPEN PLANT, WITHOUT STIMULATING EXCESSIVE GROWTH. THINNING IS USED ON CRAB APPLES, LILACS, VIBURNUMS, ETC.
10. RENEWAL PRUNING: REMOVE OLDEST BRANCHES OF SHRUB AT GROUND, LEAVING THE YOUNGER, MORE VIGOROUS BRANCHES. ALSO REMOVE WEAK STEMS. ON OVERGROWN PLANTS, THIS METHOD MAY BE BEST DONE OVER A THREE-YEAR PERIOD. RENEWAL PRUNING MAY BE USED ON FORSYTHIA, HYDRANGEA, SPIRAEA, ETC.

PLANTS OVERHANGING PASSAGEWAYS AND PARKING AREAS AND DAMAGED PLANTS SHALL BE PRUNED AS NEEDED.

SHADE TREES THAT CANNOT BE ADEQUATELY PRUNED FROM THE GROUND SHALL NOT BE INCLUDED IN THE MAINTENANCE CONTRACT. A CERTIFIED ARBORIST UNDER A SEPARATE CONTRACT SHALL PERFORM THIS TYPE OF WORK.

**SPRING CLEANUP**

PLANT BEDS SHALL RECEIVE A GENERAL CLEANUP BEFORE FERTILIZING AND MULCHING. CLEANUP INCLUDES REMOVING DEBRIS AND TRASH FROM BEDS AND CUTTING BACK HERBACEOUS PERENNIALS LEFT STANDING THROUGH WINTER, E.G. ORNAMENTAL GRASSES, SEDUM AUTUMN JOY.

**FERTILIZING**

FOR TREES, THE RATE OF FERTILIZATION DEPENDS ON THE TREE SPECIES, TREE VIGOR, AREA AVAILABLE FOR FERTILIZATION, AND GROWTH STAGE OF THE TREE. MATURE SPECIMENS BENEFIT FROM FERTILIZATION EVERY 3 TO 4 YEARS; YOUNGER TREES SHALL BE FERTILIZED MORE OFTEN DURING RAPID GROWTH STAGES.

THE CURRENT RECOMMENDATION IS BASED ON THE RATE OF 1000 SQUARE FEET OF AREA UNDER THE TREE TO BE FERTILIZED. FOR DECIDUOUS TREES, 2 TO 6 POUNDS OF NITROGEN PER 1000 SQUARE FEET; FOR
NARROW-LEAF EVERGREENS, 1 TO 4 POUNDS OF NITROGEN PER 1000 SQUARE FEET; FOR BROADLEAF EVERGREENS, 1 TO 3 POUNDS OF NITROGEN PER 1000 SQUARE FEET.

SHRUBS AND GROUNDCOVER SHALL BE TOP-DRESSED WITH COMPOST 1" DEEP OR FERTILIZED ONCE IN MARCH WITH 10-6-4 ANALYSIS FERTILIZER AT THE RATE OF 3 POUNDS PER 100 SQUARE FEET OF BED AREA.
ERICACEOUS MATERIAL SHALL BE FERTILIZED WITH AN ERICACEOUS FERTILIZER AT THE MANUFACTURER'S RECOMMENDATION RATE. IF PLANTS ARE GROWING POORLY, A SOIL SAMPLE SHOULD BE TAKEN.

**TREES, SHRUBS, & GROUND COVER (CONT.)**

**MULCHING**

ANNUALLY, ALL TREE AND SHRUB BEDS WILL BE PREPARED AND MULCHED, TO A MINIMUM DEPTH OF 3" WITH QUALITY MULCH TO MATCH EXISTING. BED PREPARATION SHALL INCLUDE REMOVING ALL WEEDS, CLEANING UP SAID BED, EDGING AND CULTIVATING DECAYED MULCH INTO THE SOIL. DEBRIS FROM EDGING IS TO BE REMOVED FROM BEDS WHERE APPLICABLE. IF DEEMED NECESSARY, A PRE-EMERGENT HERBICIDE MAY BE APPLIED TO THE SOIL TO INHIBIT THE GROWTH OF FUTURE WEEDS.

ORGANICALLY MAINTAINED GARDENS SHALL NOT RECEIVE ANY PRE-EMERGENT HERBICIDES. MULCH IN EXCESS OF 4" WILL BE REMOVED FROM THE BED AREAS. SPECIAL CARE SHALL BE TAKEN IN THE MULCHING OPERATION NOT TO OVER-MULCH OR COVER THE BASE OF TREES AND SHRUBS. THIS CAN BE DETRIMENTAL TO THE HEALTH OF THE PLANTS.

**WEEDING**

ALL BEDS SHALL BE WEEDED ON A CONTINUOUS BASIS THROUGHOUT THE GROWING SEASON TO MAINTAIN A NEAT APPEARANCE AT ALL TIMES.

PRE-EMERGENT (SOIL-APPLIED) AND POST-EMERGENT (FOLIAR-APPLIED) HERBICIDES SHALL BE USED WHERE AND WHEN APPLICABLE AND IN ACCORDANCE WITH THE PRODUCT'S LABEL.

**INSECT & DISEASE CONTROL: TREES, SHRUBS & GROUNDCOVER**

THE MAINTENANCE CONTRACTOR SHALL BE RESPONSIBLE FOR MONITORING THE LANDSCAPE SITE ON A REGULAR BASIS. THE MONITORING FREQUENCY SHALL BE MONTHLY EXCEPT FOR GROWING SEASON, WHICH WILL BE EVERY OTHER WEEK. TRAINED PERSONNEL SHALL MONITOR FOR PLANT DAMAGING INSECT ACTIVITY, PLANT PATHOGENIC DISEASES AND POTENTIAL CULTURAL PROBLEMS IN THE LANDSCAPE. THE PEST OR CULTURAL PROBLEM WILL BE IDENTIFIED UNDER THE SUPERVISION OF THE CONTRACTOR.

FOR PLANT DAMAGING INSECTS AND MITES IDENTIFIED IN THE LANDSCAPE, THE CONTRACTOR SHALL CONSULT AND FOLLOW THE RECOMMENDATIONS OF THE MOST CURRENT EDITION OF THE STATE COOPERATIVE SERVICE PUBLICATION ON INSECT CONTROL ON LANDSCAPE PLANT MATERIAL.

PLANT PATHOGENIC DISEASE PROBLEMS IDENTIFIED BY THE CONTRACTOR THAT CAN BE RESOLVED BY PRUNING OR PHYSICAL REMOVAL OF DAMAGED PLANT PARTS WILL BE PERFORMED AS PART OF THE CONTRACT. FOR AN ADDITIONAL CHARGE, PLANT PATHOGENIC DISEASES THAT CAN BE RESOLVED THROUGH PROPERLY TIMED APPLICATIONS OF FUNGICIDES SHALL BE MADE WHEN THE OWNER AUTHORIZES IT.

IF THE CONTRACTOR NOTES AN ESPECIALLY INSECT-OR DISEASE-PRONE PLANT SPECIES IN THE LANDSCAPE, HE/SHE WILL SUGGEST REPLACEMENT WITH A MORE PEST-RESISTANT CULTIVAR OR SPECIES THAT IS CONSISTENT WITH THE INTENT OF THE LANDSCAPE DESIGN.

NOTE: FOR IDENTIFICATION OF PLANT-DAMAGING INSECTS AND MITES, A REFERENCE TEXTBOOK THAT CAN BE USED IS INSECTS THAT FEED ON TREES AND SHRUBS BY JOHNSON AND LYON, COMSTOCK PUBLISHING ASSOCIATES. FOR PLAN PATHOGENIC DISEASES, TWO REFERENCES ARE SUGGESTED: SCOUTING AND CONTROLLING WOODY ORNAMENTAL DISEASES IN LANDSCAPES AND NURSERIES, AUTHORIZED BY GARY MOORMAN, PUBLISHED BY PENN STATE COLLEGE OF AGRICULTURAL SCIENCES, AND DISEASES OF TREES AND SHRUBS BY SINCLAIR AND LYON, PUBLISHED BY COMSTOCK PUBLISHING PRESS.

**TRASH REMOVAL**

THE MAINTENANCE CONTRACTOR SHALL REMOVE TRASH FROM ALL SHRUB AND GROUNDCOVER BEDS WITH EACH VISIT.

**LEAF REMOVAL**

ALL FALLEN LEAVES SHALL BE REMOVED FROM THE SITE IN NOVEMBER AND ONCE IN DECEMBER. IF REQUESTED BY THE OWNER, THE MAINTENANCE CONTRACTOR, AT AN ADDITIONAL COST TO THE OWNER SHALL PERFORM SUPPLEMENTAL LEAF REMOVALS.

**WINTER CLEAN-UP**

THE PROJECT SHALL RECEIVE A GENERAL CLEAN-UP ONCE DURING EACH OF THE WINTER MONTHS, I.E., JANUARY, FEBRUARY, AND MARCH.

CLEAN-UP INCLUDES:

- CLEANING CURBS AND PARKING AREAS
- REMOVING ALL TRASH AND UNWANTED DEBRIS
- TURNING MULCH WHERE NECESSARY
- INSPECTION OF GROUNDS

## SEASONAL COLOR: PERENNIALS, ANNUALS, AND BULBS

THE INSTALLATION OF PERENNIALS, ANNUALS, AND BULBS, UNLESS SPECIFIED HEREIN, SHALL BE REVIEWED WITH THE OWNER, AND, IF ACCEPTED, INSTALLED AND BILLED TO THE OWNER.

**SEASONAL COLOR MAINTENANCE**

PERENNIALIZATION OF BULBS:

1. AFTER FLOWERING, CUT OFF SPENT FLOWER HEADS.
2. ALLOW LEAVES OF DAFFODILS AND HYACINTHS TO REMAIN FOR SIX WEEKS AFTER FLOWERS HAVE FADED. CUT OFF AT BASE.
3. ALLOW LEAVES OF OTHER BULBS TO YELLOW NATURALLY AND THEN CUT OFF AT BASE.
4. APPLY FERTILIZER AFTER FLOWERING IN SPRING, POSSIBLY AGAIN IN FALL. APPLY 10-10-10 AT THE RATE OF 2 POUNDS PER 1000 SQUARE FEET OR TOP-DRESS WITH COMPOST 1" DEEP. FALL FERTILIZATION WITH A BULB FERTILIZER OR MULCHING WITH 1" OF COMPOST IS OPTIONAL.

FLOWER ROTATION:

1. BULBS: REMOVE THE ENTIRE PLANT AND BULB AFTER FLOWERS HAVE FADED OR AT THE DIRECTION OF THE OWNER AND INSTALL NEW PLANTS IF INCLUDED IN CONTRACT.
2. SUMMER ANNUALS OR FALL PLANTS:
   A. DEAD HEADING: PINCH AND REMOVE DEAD FLOWERS ON ANNUALS AS NECESSARY.
   B. FERTILIZING SUMMER ANNUALS: FERTILIZE USING ONE OR TWO METHODS: APPLY A SLOW-RELEASE FERTILIZER IN MAY FOLLOWING MANUFACTURER'S RECOMMENDATIONS. A BOOSTER SUCH AS 10-10-10 MAY BE NECESSARY IN LATE SUMMER, OR, APPLY LIQUID FERTILIZATIONS OF 20-20-20 WATER-SOLUBLE FERTILIZERS, NOT TO EXCEED 2 POUNDS OF 20-20-20 PER 100 GALLONS OF WATER, MONTHLY; OR MULCH WITH COMPOST 1" DEEP.
   C. REMOVAL: IF FALL PLANTS ARE TO BE INSTALLED, SUMMER ANNUALS SHALL BE LEFT IN THE GROUND UNTIL THE FIRST KILLING FROST AND THEN REMOVED, UNLESS OTHERWISE DIRECTED BY THE OWNER.

**PERENNIALS:**

1. AFTER INITIAL INSTALLATION, IF A TIME-RELEASED FERTILIZER HAS BEEN INCORPORATED DURING PLANT INSTALLATION, NO MORE FERTILIZER NEED BE APPLIED THE FIRST GROWING SEASON.
2. THE FOLLOWING YEAR:
   A. FERTILIZE PERENNIALS WITH A SLOW-RELEASE FERTILIZER OR ANY 50% ORGANIC FERTILIZER, OR MULCH PERENNIALS WITH COMPOST 1" DEEP.
   B. CUT ALL DECIDUOUS PERENNIALS FLUSH TO THE GROUND BY MARCH 1, IF THIS WAS NOT DONE THE PREVIOUS FALL, TO ALLOW NEW GROWTH TO DEVELOP FREELY.
   C. MULCH THE PERENNIAL BED ONCE IN EARLY SPRING AT 1"-2" DEPTH. IF SOIL IS BARED IN LATE FALL, RE-MULCH LIGHTLY AFTER GROUND IS FROZEN TO PROTECT PERENNIALS.
   D. INSPECT FOR INSECT OR DISEASE PROBLEMS ON PERENNIALS. MONITOR AND CONTROL SLUGS ON HOSTAS AND LIGULARIAS. POWDERY MILDEW ON PHLOX, MONARDAS, AND ASTERS CAN BE PREVENTED WITH PROPERLY TIMED FUNGICIDES OR USE OF DISEASE-RESISTANT VARIETIES.
   E. WEED PERENNIAL BED AS SPECIFIED IN "WEEDING" ABOVE.
   F. PRUNE BRANCHING SPECIES TO INCREASE DENSITY. CUT ONLY THE FLOWERING STEMS AFTER BLOOMING. DO NOT REMOVE THE FOLIAGE.
3. THE FOLLOWING FALL CUT BACK DETERIORATING PLANT PARTS UNLESS INSTRUCTED TO RETAIN FOR WINTER INTEREST, E.G. SEDUM AUTUMN JOY AND ORNAMENTAL GRASSES.
4. LONG-TERM CARE:
   A. DIVIDE PLANTS THAT OVERCROWD THE SPACE PROVIDED. DIVIDE ACCORDING TO THE SPECIES. SOME NEED FREQUENT DIVIDING, E.G. ASTERS AND YARROW EVERY TWO YEARS; OTHER RARELY, IF EVER, E.G. PEONIES, HOSTAS, AND ASTILBE.
   B. FOR DETAILED INFORMATION REGARDING THE CARE OF SPECIFIC PERENNIALS, REFER TO ALL ABOUT PERENNIALS BY ORTHO; PERENNIALS: HOW TO SELECT, GROW AND ENJOY BY PAMELA HARPER AND FREDERICK MCGOUTY, HP BOOKS PUBLISHER; HERBACEOUS PERENNIAL PLANTS: A TREATISE ON THEIR IDENTIFICATION, CULTURE AND GARDEN ATTRIBUTES BY ALLAN ARMITAGE, STIPES PUB LLC.

## SUMMARY OF MAINTENANCE

**LAWN MAINTENANCE**

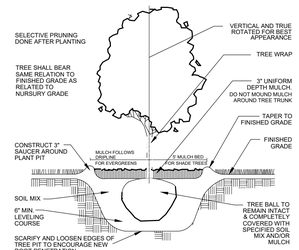
1. SOIL ANALYSIS PERFORMED ANNUALLY TO DETERMINE PH. IF PH DOES NOT FALL WITHIN SPECIFIED RANGE, ADJUST ACCORDING TO SOIL TEST RECOMMENDATIONS.
2. MAINTAIN PROPER FERTILITY AND PH LEVELS OF THE SOIL TO PROVIDE AN ENVIRONMENT CONDUCIVE TO TURF VITALITY FOR TURF GRASSES.
3. MOW TURF ON A REGULAR BASIS AND AS SEASON AND WEATHER DICTATES. REMOVE NO MORE THAN THE TOP 1/3 OF LEAF BLADE. CLIPPINGS ON PAVED AND BED AREAS WILL BE REMOVED.
4. AERATE WARM SEASON TURF AREAS TO MAINTAIN HIGH STANDARDS OF TURF APPEARANCE.
5. APPLY PRE-EMERGENT TO TURF IN TWO APPLICATIONS IN EARLY FEBRUARY AND EARLY APRIL TO EXTEND BARRIER.
6. APPLY POST EMERGENT AS NEEDED TO CONTROL WEEDS.
7. MECHANICALLY EDGE CURBS AND WALKS.
8. APPLY NON-SELECTIVE HERBICIDE, TO MULCHED BED AREAS AND PAVEMENT AND REMOVE EXCESS RUNNERS TO MAINTAIN CLEAN DEFINED BEDS.

**TREE, GROUNDCOVER AND SHRUB BED MAINTENANCE**

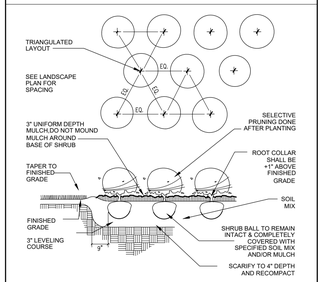
1. PRUNE SHRUBS, TREES AND GROUNDCOVER TO ENCOURAGE HEALTHY GROWTH AND CREATE A NATURAL APPEARANCE.
2. MULCH TO BE APPLIED IN FEBRUARY/MARCH WITH A HALF RATE IN LATE SUMMER TO TOP DRESS.
3. APPLY PRE-EMERGENT HERBICIDES IN FEBRUARY AND APRIL.
4. MANUAL WEED CONTROL TO MAINTAIN CLEAN BED APPEARANCE.
5. APPLY FUNGICIDES AND INSECTICIDES AS NEEDED TO CONTROL INSECTS AND DISEASE.
6. ORNAMENTAL SHRUBS, TREES AND GROUNDCOVERS TO BE FERTILIZED THREE (3) TIMES PER YEAR WITH A BALANCED MATERIAL (JANUARY/FEBRUARY, APRIL/MAY, AND OCTOBER/NOVEMBER)
7. EDGE ALL MULCHED BEDS.
8. REMOVE ALL LITTER AND DEBRIS.

**GENERAL MAINTENANCE**

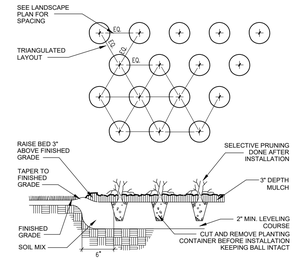
1. REMOVE ALL MAN-MADE DEBRIS, BLOW EDGES.
2. INSPECT GROUNDS ON A MONTHLY BASIS AND SCHEDULE INSPECTION WITH UNIT OPERATOR.



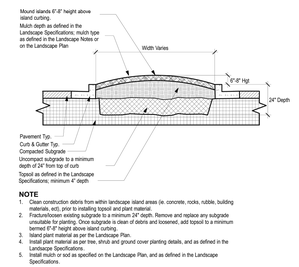

1 L2.0 TREE PLANTING DETAIL
SCALE: NO SCALE




2 L2.0 SHRUB PLANTING DETAIL
SCALE: NO SCALE

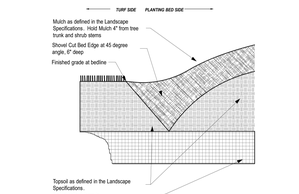



3 L2.0 GROUNDCOVER DETAIL
SCALE: NO SCALE




**NOTE**
1. Clean construction debris from within landscape island areas (ie. concrete, rocks, rubble, building materials, ect), prior to installing topsoil and plant material.
2. Fracture/loosen existing subgrade to a minimum 24" depth. Remove and replace any subgrade unsuitable for planting. Once subgrade is clean of debris and loosened, add topsoil to a minimum bermed 6"-8" height above island curbing.
3. Island plant material as per the Landscape Plan.
4. Install plant material as per tree, shrub and ground cover planting details, and as defined in the Landscape Specifications.
5. Install mulch or sod as specified on the Landscape Plan, and as defined in the Landscape Specifications.

4 L2.0 PARKING ISLAND DETAIL
SCALE: NO SCALE




5 L2.0 SPADED PLANTING BED EDGE DETAIL
SCALE: NO SCALE

## GENERAL CONSTRUCTION NOTES

1. REQUIRED LANDSCAPE MATERIAL SHALL SATISFY AMERICAN ASSOCIATION OF NURSERYMEN STANDARDS AND BE STAKED, WRAPPED, WATERED AND MULCHED PER ORDINANCE.
2. BEFORE ANY EXCAVATION ON THE SITE, CALL TO LOCATE ANY EXISTING UTILITIES ON THE SITE. THE CONTRACTOR SHALL FAMILIARIZE HIM/HERSELF WITH THE LOCATIONS OF ALL BURIED UTILITIES IN THE AREAS OF WORK BEFORE STARTING OPERATIONS. THE CONTRACTOR SHALL BE LIABLE FOR THE COST OF REPAIRING OR REPLACING ANY BURIED CONDUITS, CABLES OR PIPING DAMAGED DURING THE INSTALLATION OF THIS WORK.
3. FOUR FOOT HIGH FENCING OR OTHER RIGID MATERIAL IS TO BE ERECTED AROUND THE DRIP-LINE OF ALL TREES TO BE SAVED.
4. PLANT QUANTITIES ON PLANT LIST INTENDED TO BE A GUIDE. ALL QUANTITIES SHALL BE CHECKED AND VERIFIED ON PLANTING PLAN. ANY DISCREPANCIES SHALL BE DISCUSSED WITH THE LANDSCAPE ARCHITECT.
5. ANY DEVIATIONS FROM OR MODIFICATIONS TO THIS PLAN SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
6. CONTRACTOR TO NOTIFY LANDSCAPE ARCHITECT UPON DELIVERY OF PLANT MATERIAL TO THE SITE. LANDSCAPE ARCHITECT RESERVES THE RIGHT TO REJECT ANY PLANT MATERIAL THAT DOESN'T MEET STANDARDS OR SPECIFICATIONS OF THE PROJECT.
7. ALL PLANT MATERIAL TO BE INSTALLED PER THE PLANTING DETAILS PROVIDED ON THIS PLAN SET.
8. ALL BED EDGES TO BE WELL SHAPED, SPADE CUT, WITH LINES AND CURVES AS SHOWN ON THIS PLAN SET.
9. ALL PLANTING BEDS TO BE PREPARED WITH PLANTING MIX: 50% TOPSOIL, 50% SOIL AMENDMENTS (3 PARTS PEATMOSS, 1 PART COMPOST, 1 PART SAND)
10. ALL PARKING LOT ISLANDS SHALL BE BACKFILLED WITH THE FOLLOWING: 2' OF BLENDED GARDEN SOIL MIX (60% TOPSOIL, 30% COMPOST, 10% SAND) OR 6" OF *ONE STEP* BY MIDWEST TRADING, TOP DRESSED AND TILLED INTO 18" OF TOPSOIL.
11. ALL SPECIFIED LANDSCAPE MATERIAL INDICATED ON THE CONSTRUCTION DOCUMENTS WILL BE REQUIRED TO BE MAINTAINED THROUGHOUT THE LIFE OF THE PROJECT AND MUST BE REPLACED SHOULD IT DIE OR BECOME DAMAGED.
12. ALL PLANT MATERIAL SHALL HAVE A ONE YEAR GUARANTEE FROM SUBSTANTIAL COMPLETION AS DETERMINED BY THE LANDSCAPE ARCHITECT, AND SHALL BE REPLACED SHOULD IT DIE WITHIN THAT PERIOD.
13. PROTECT STRUCTURES, SIDEWALKS, PAVEMENTS AND UTILITIES TO REMAIN FROM DAMAGE CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, WASHOUTS AND OTHER HAZARDS CAUSED BY SITE IMPROVEMENT OPERATIONS.
14. ALL LAWN AREAS TO BE SEEDED WITH STANDARD TURF GRASS SEED AND COVERED WITH EROSION CONTROL BLANKET. UNLESS OTHERWISE SPECIFIED ON THE PLAN.
15. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES, EXCLUDING SHRUB BEDS, TO BE RESTORED WITH TURF GRASS SEED AND COVERED WITH AN EROSION CONTROL BLANKET.
16. CAREFULLY MAINTAIN PRESENT GRADE AT BASE OF ALL EXISTING TREES TO REMAIN. PREVENT ANY DISTURBANCE OF EXISTING TREES INCLUDING ROOT ZONES. USE TREE PROTECTION BARRICADES WHERE INDICATED. PROTECT EXISTING TREES TO REMAIN AGAINST UNNECESSARY CUTTING, BREAKING OR SKINNING OF ROOTS, BRUISING OF BARK OR SMOTHERING OF TREES. DRIVING, PARKING, DUMPING, STOCKPILING AND/OR STORAGE OF VEHICLES, EQUIPMENT, SUPPLIES, MATERIALS OR DEBRIS ON TOP THE ROOT ZONES AND/OR WITHIN THE DRIPLINE OF EXISTING TREES OR OTHER PLANT MATERIAL TO REMAIN IS STRICTLY PROHIBITED.
17. THE CONTRACTOR AT ALL TIMES SHALL KEEP THE PREMISES ON WHICH WORK IS BEING DONE, CLEAR OF RUBBISH AND DEBRIS. ALL PAVEMENT AND DEBRIS REMOVED FROM THE SITE SHALL BE DISPOSED OF LEGALLY
18. ALL WORK AND OPERATIONS SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND ORDINANCES.

Kathryn Talty
landscape

# FINAL PLAT OF
# OREST EXPRESS SUBDIVISION

P.I.N.:
02-02-101-019 (TRACT II)
02-02-101-020 (TRACT III)
02-02-101-021 (TRACT IV)
02-02-101-013 (TRACT V)
02-02-101-014 (TRACT V)
02-02-101-005 (TRACT VI)

BEING A SUBDIVISION IN THE NORTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 2, TOWNSHIP 42 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN

**NEW LOTS AND EASEMENT GRANT INFORMATION**

N

SCALE 1" = 40'

0 40 80

BASIS OF BEARINGS:
TRUE NORTH BASED ON GEODETIC OBSERVATION IL EAST ZONE

## LEGEND

| | |
|---|---|
| ⊠ | RIGHT-OF-WAY MONUMENT |
| ⊗ | DISC |
| ● | IRON / STEEL ROD |
| ○ | IRON PIPE |
| × | CUT CROSS |
| • | PK / MAG NAIL |
| ▾ | RAILROAD SPIKE |
| CL | CENTERLINE |
| IP | IRON PIPE |
| IR | IRON ROD |
| (M) | MEASURED |
| (R) | RECORD |

EASEMENT FOR PUBLIC UTILITIES-WATERMAIN HEREBY GRANTED

CENTERLINE OF RAND ROAD

PER DOCUMENT 12592034

CONC MONUMENT TO BE SET AT CORNER

NOTE: CENTERLINE RESTRICTED VEHICULAR ACCESS POINT TO US ROUTE 12 - RAND ROAD FROM LOT #1 AS PLATTED HEREIN.

60.38'

50'

50'

HERETOFORE DEDICATED PER DOCUMENT 13167/9085 (100' RIGHT OF WAY) PER DOCUMENT 12592034

**US ROUTE 12 - RAND ROAD**

UNSUBDIVIDED LAND

10'

10' PUBLIC UTILITY EASEMENT HEREBY GRANTED

10' PUBLIC UTILITY EASEMENT HEREBY GRANTED

10'

**471.94'(M)** 472.19'(R) **N46°39'51"E(M)**

**499.91'(M)** 500.00'(R) **S43°15'37"E(M)**

NOTE: CENTERLINE DIRECT VEHICULAR ACCESS POINT TO US ROUTE 12 - RAND ROAD FROM LOT #1 AS PLATTED HEREIN.

39.52'

## LOT 1

SAID PROPERTY CONTAINS 344,172 SQUARE FEET OR 7.901 ACRES, MORE OR LESS.

**550.75'(M)** 551.08'(R) **N00°18'54"E(M)**

10' PUBLIC UTILITY EASEMENT HEREBY GRANTED

10'

**746.19'(M)** 745.89'(R) **S46°45'51"W(M)**

UNSUBDIVIDED LAND

UNSUBDIVIDED LAND

RIGHTS OF THE PUBLIC - LAND TO BE LEFT OPEN FOR PUBLIC ROAD PER DOCUMENT 11385459

33'

RIGHTS OF THE PUBLIC - LAND TO BE LEFT OPEN FOR PUBLIC ROAD PER DOCUMENT 10874958

33'

APPROXIMATE LOCATION DRAINAGE PIPE AREA EASEMENT PER DOCUMENT 1522522031

33'

CONC MONUMENT TO BE SET AT CORNER

**145.26'(M&R) N89°46'06"W(M)**

ILLINOIS DEPARTMENT OF TRANSPORTATION ACCEPTANCE

THIS PLAT HAS BEEN APPROVED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION WITH RESPECT TO ROADWAY ACCESS PURSUANT TO PARAGRAPH 2 OF "AN ACT TO REVISE THE LAW IN RELATION TO PLATS," AS AMENDED. A PLAN THAT MEETS THE REQUIREMENTS CONTAINED IN THE DEPARTMENT'S "POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS" WILL BE REQUIRED BY THE DEPARTMENT.

BY:_____ DATE:_____, 20_____.
JOSE RIOS, P.E.
REGION ONE ENGINEER

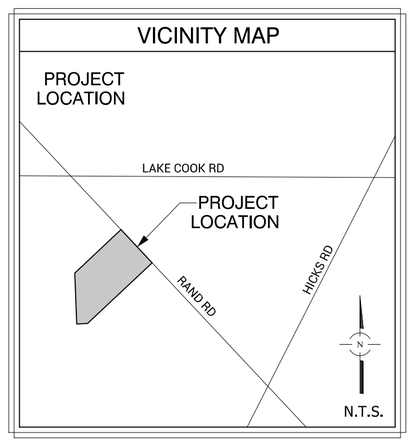
IDOT NOTES:

1. THERE SHALL BE AT MOST ONE (1) RESTRICTED VEHICULAR ACCESS BETWEEN THE PLATTED LANDS AND US ROUTE 12 FROM LOT 1, AS PLATTED HEREIN.

2. THERE SHALL BE AT MOST ONE (1) DIRECT VEHICULAR ACCESS BETWEEN THE PLATTED LANDS AND US ROUTE 12 FROM LOT 1, AS PLATTED HEREIN.

3. ALL OTHER ACCESS SHALL BE VIA INTERNAL CIRCULATION.

VICINITY MAP




PREPARED FOR:
OREST EXPRESS INC.
221 JOEY DRIVE,
ELK GROVE VILLAGE, IL 60007

**FOR REVIEW PURPOSES ONLY**

| REVISIONS: |
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| 03/19/2024 |
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SPACECO INC.
CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

DATE: 02/05/2024
JOB NO: 11624.03
FILENAME: 11624.03SUBPLAT-01
SHEET 1 OF 3

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Attachment: Plat of Subdivision (2240 - 2266 N. Rand Road - FPD Distribution Use)

P.I.N.:
02-02-101-019 (TRACT II)
02-02-101-020 (TRACT III)
02-02-101-021 (TRACT IV)
02-02-101-013 (TRACT V)
02-02-101-014 (TRACT V)
02-02-101-005 (TRACT VI)

# FINAL PLAT OF
# OREST EXPRESS SUBDIVISION

BEING A SUBDIVISION IN THE NORTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 2, TOWNSHIP 42 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN

**EXISTING BOUNDARY INFORMATION**

N

SCALE 1" = 40'

0 40 80

BASIS OF BEARINGS:
TRUE NORTH BASED ON GEODETIC OBSERVATION IL EAST ZONE

## LEGEND

| | |
|---|---|
| ⊠ | RIGHT-OF-WAY MONUMENT |
| ⊗ | DISC |
| ● | IRON / STEEL ROD |
| ○ | IRON PIPE |
| × | CUT CROSS |
| • | PK / MAG NAIL |
| ▾ | RAILROAD SPIKE |
| CL | CENTERLINE |
| IP | IRON PIPE |
| IR | IRON ROD |
| (M) | MEASURED |
| (R) | RECORD |

WEST LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 2-42-10 AS SHOWN ON RIGHT OF WAY PLAT FOR LAKE-COOK ROAD PER DOCUMENT 25688277

16.12'(R)
16.00'(M)

POINT OF COMMENCEMENT TRACT II, III, IV, V & VI

NORTH LINE OF THE NORTHWEST QUARTER OF SECTION 2-42-10

WEST LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 2-42-10 AS MONUMENTED

FOUND IR W/CAP 0.09'S

FOUND 3/4" IP 0.26'N

CENTERLINE OF RAND ROAD

100.00'(R)
951.09'(R)
950.75'(M)
850.75'(M)
851.08'(R)

POINT OF BEGINNING TRACT VI
A POINT 950.75'(M) 851.08'(R) SOUTHEASTERLY ALONG THE CENTERLINE OF RAND ROAD FROM THE POINT OF COMMENCEMENT OF TRACT V

FOUND 3/4" IP 0.50'N & ON-LINE

428.2'(R)

HERETOFORE DEDICATED PER DOCUMENT 13157190B5
(100' RIGHT OF WAY)
200.00'(M&R)
PER DOCUMENT 12592034

**US ROUTE 12 - RAND ROAD**

50'
50'

POINT OF BEGINNING TRACT V
A POINT 750.13'(M) 751.09'(R) SOUTHEASTERLY ALONG THE CENTERLINE OF RAND ROAD FROM THE POINT OF COMMENCEMENT OF TRACT V

100.00'(M&R)

FOUND IR ON-LINE

UNSUBDIVIDED LAND

WEST LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 2-42-10 AS SHOWN ON RIGHT OF WAY PLAT FOR LAKE-COOK ROAD PER DOCUMENT 25688277

WEST LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 2-42-10 AS MONUMENTED

N46°39'51"E(M)
471.94'(M)
521.94'(M)
522.19'(R)

FOUND 1" IP 1.09'SW & 3.64'NW

FOUND BENT 5/8"(R) 0.85'NE & 0.35'SE

S43°15'37"E(M)
499.91'(M)

POINT OF BEGINNING TRACT IV

100.00'(M&R)

137.77'(R)

TRACT VI

UNSUBDIVIDED LAND

A POINT 773.79'(R) SOUTH OF THE NORTH LINE OF SECTION 2-42-10 FOUND 3/4" BENT IP AT CORNER

711.71'(R)
711.76'(M)

POINT OF BEGINNING TRACT II & III

100.00'(M&R)

FOUND IP 0.11'N

135.00'(M&R)

A

FOUND 1/2" IP 3.64'S & 1.05'E

FOUND 1/2" IP 0.16'S & ON-LINE

100.00'(M&R)

(M&R) 135.00'

TRACT II
EXCEPTION OF TRACT III

275.38'(M)
275.54'(R)

806.66'(M)
806.47'(R)

TRACT V

902.21'(R)
901.57'(M)

TRACT IV

N00°18'54"E(M)
550.75'(M)

TRACT III

S46°45'51"W(M)
746.19'(M)
796.19'(M)
795.89'(R)

UNSUBDIVIDED LAND

UNSUBDIVIDED LAND

A POINT 1034.76(R) SOUTH OF THE INTERSECTION OF THE CENTER OF RAND ROAD AND THE WEST LINE OF THE NORTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 2-42-10

33'

RIGHTS OF THE PUBLIC - LAND TO BE LEFT OPEN FOR PUBLIC ROAD PER DOCUMENT 11385459

137.67'(M)
137.77'(R)

A POINT 1172.53(R) SOUTH OF THE INTERSECTION OF THE CENTER OF RAND ROAD AND THE WEST LINE OF THE NORTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 2-42-10

RIGHTS OF THE PUBLIC - LAND TO BE LEFT OPEN FOR PUBLIC ROAD PER DOCUMENT 10874958

33'

SOUTHWEST CORNER OF THE NORTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 2-42-10

137.69'(M)
137.77'(R)

APPROXIMATE LOCATION DRAINAGE PIPE AREA EASEMENT PER DOCUMENT 1522522031

33'

FOUND 1/2" BENT IP AT CORNER

145.26'(M&R)
N89°46'06"W(M)

FOUND 5/8" IR 0.35'S & 0.12'E

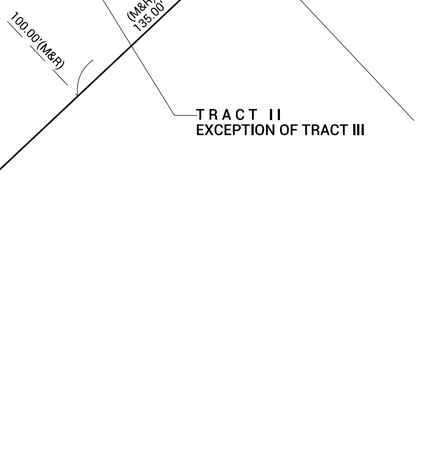
A POINT 1097.34'(R) WEST OF THE INTERSECTION OF THE CENTER LINE OF RAND ROAD WITH THE SOUTH LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 2-42-10

SOUTH LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 2-42-10

NORTH LINE OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 2-42-10

Ⓐ = A POINT THAT IS 755.42'(R) NORTHWESTERLY OF THE INTERSECTION OF THE CENTER LINE OF RAND ROAD AND THE SOUTH LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 2-42-10

VICINITY MAP




PREPARED FOR:
OREST EXPRESS INC.
221 JOEY DRIVE,
ELK GROVE VILLAGE, IL 60007

**FOR REVIEW PURPOSES ONLY**

| REVISIONS: |
|---|
| 03/19/2024 |

SPACECO INC.
CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

DATE: 02/05/2024
JOB NO: 11624.03
FILENAME: 11624.03SUBPLAT-01
SHEET 2 OF 3

N:\Projects\11624\11624.03-JLL\SURVEY\11624.03SUBPLAT-01.dgn SHEET 2 User=jchristoph

Attachment: Plat of Subdivision (2240 - 2266 N. Rand Road - FPD Distribution Use)

P.I.N.:
02-02-101-019 (TRACT II)
02-02-101-020 (TRACT III)
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02-02-101-014 (TRACT V)
02-02-101-005 (TRACT VI)

# FINAL PLAT OF
# OREST EXPRESS SUBDIVISION

BEING A SUBDIVISION IN THE NORTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 2, TOWNSHIP 42 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN

OWNER'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK )

THIS IS TO CERTIFY THAT _____ IS THE OWNER OF THE PROPERTY DESCRIBED HEREON AND THAT IT HAS CAUSED THE SAID PROPERTY TO BE PLATTED AS SHOWN HEREON FOR THE USES AND PURPOSES THEREIN SET FORTH, AND DOES HEREBY ACKNOWLEDGE AND ADOPT THE SAME UNDER THE TITLE THEREON INDICATED.

THIS IS TO ALSO CERTIFY THAT AS OWNER(S) OF THE PROPERTY AS LEGALLY DESCRIBED ON THIS PLAT, HAVE DETERMINED TO THE BEST OF OUR KNOWLEDGE THE SCHOOL DISTRICT IN WHICH EACH OF THE FOLLOWING LOTS LIE.

SCHOOL DISTRICTS

COMMUNITY CONSOLIDATED SCHOOL DISTRICT NO. 15
TOWNSHIP HIGH SCHOOL DISTRICT 211
HARPER COMMUNITY COLLEGE DISTRICT NO. 512

DATED THIS _____ DAY OF _____, A.D. 20_____.

SIGNED:_____

_____
PRINTED NAME AND TITLE

ADDRESS:
OREST EXPRESS INC.
221 JOEY DRIVE,
ELK GROVE VILLAGE, IL 60007

NOTARY PUBLIC CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF _____)

I,_____, A NOTARY PUBLIC IN AND FOR THE COUNTY AND STATE AFORESAID, DO HEREBY CERTIFY THAT

_____, TITLE _____ AND

_____, TITLE _____

OF _____ WHO IS/ARE PERSONALLY KNOWN TO ME TO BE THE SAME WHOSE NAME(S) IS/ARE SUBSCRIBED TO THE FOREGOING CERTIFICATE, APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT HE/SHE/THEY DID SIGN AND DELIVER THIS INSTRUMENT AS A FREE AND VOLUNTARY ACT FOR THE USES AND PURPOSES HEREIN SET FORTH.

GIVEN UNDER MY HAND AND NOTARIAL SEAL

THIS _____ DAY OF _____, A.D. 20_____.

_____
NOTARY PUBLIC

SURFACE WATER DRAINAGE CERTIFICATE

STATE OF ILLINOIS )
) SS
COUNTY OF_____)

WE HEREBY CERTIFY TO THE BEST OF OUR KNOWLEDGE AND BELIEF THAT ADEQUATE PROVISIONS HAVE BEEN MADE FOR THE DIVERSION AND DETENTION OF SURFACE WATERS INTO PUBLIC AREAS OR DRAINS WITHIN THE RIGHTS OF THE SUBDIVIDER AND THAT SUCH SURFACE WATERS WILL NOT BE DEPOSITED ON ADJACENT LAND OWNERS/PROPERTY IN SUCH CONCENTRATION AS MAY CAUSE DAMAGE BY EROSION OR SEDIMENTATION TO SUCH PROPERTY BECAUSE OF CONSTRUCTION OF THE SUBDIVISION.

DATED THIS _____ DAY OF _____ , A.D. 20 _____ .

_____
BY: OWNER

_____
BY: ILLINOIS PROFESSIONAL ENGINEER

MORTGAGEE'S CERTIFICATE

STATE OF ILLINOIS )
) SS
COUNTY OF _____)

THE UNDERSIGNED, _____, AS MORTGAGEE, UNDER THE PROVISIONS OF CERTAIN MORTGAGE DATED AND RECORDED IN THE RECORDER'S OFFICE

OF _____ COUNTY, ILLINOIS ON THE _____ DAY OF _____, A.D. 20____,

AS DOCUMENT NUMBER _____, HEREBY CONSENTS TO THE SUBDIVISION STATED HEREIN.

DATED THIS _____ DAY OF _____, 20_____.

_____
BY

_____
PRINTED NAME AND TITLE

_____
ATTEST

MORTGAGEE'S NOTARY PUBLIC

STATE OF ILLINOIS )
) SS
COUNTY OF _____)

I, _____, A NOTARY PUBLIC IN AND FOR THE COUNTY AND STATE AFORESAID, DO HEREBY CERTIFY THAT

_____
OF SAID BANK WHO IS PERSONALLY KNOWN TO ME TO BE THE SAME WHOSE NAME IS SUBSCRIBED TO THE FOREGOING CERTIFICATE, APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT HE/SHE DID SIGN AND DELIVER THIS INSTRUMENT AS A FREE AND VOLUNTARY ACT FOR THE USES AND PURPOSES HEREIN SET FORTH.

GIVEN UNDER MY HAND AND NOTARIAL SEAL THIS _____ DAY OF _____, 20____.

_____
NOTARY PUBLIC

PLANNING AND ZONING COMMISSION:

STATE OF ILLINOIS)
) SS
COUNTY OF COOK )

APPROVED BY THE PLANNING AND ZONING COMMISSION OF THE VILLAGE OF PALATINE, COOK COUNTY, ILLINOIS

DATED THIS _____ DAY OF _____, A.D. 20_____.

SIGNED:_____
CHAIRMAN

ATTEST:_____
SECRETARY

VILLAGE COUNCIL

STATE OF ILLINOIS)
) SS
COUNTY OF COOK )

APPROVED BY THE VILLAGE COUNCIL OF THE VILLAGE OF PALATINE, COOK COUNTY, ILLINOIS

DATED THIS ____ DAY OF _____, A.D. 20____.

SIGNED:_____
MAYOR

ATTEST:_____
VILLAGE CLERK

VILLAGE ENGINEER

STATE OF ILLINOIS)
) SS
COUNTY OF COOK )

THIS PLAT HAS BEEN CHECKED FOR CONFORMANCE TO THE VILLAGE OF PALATINE STANDARDS AND REQUIREMENTS, AND WORKING DRAWINGS AND SPECIFICATIONS FOR IMPROVEMENTS HAVE BEEN PREPARED IN CONFORMANCE WITH THE VILLAGE STANDARDS AND REQUIREMENTS, AND ENGINEERING FEES DUE TO THE VILLAGE OF PALATINE HAVE BEEN PAID.

DATED THIS _____ DAY OF _____, A.D. 20_____.

SIGNED:_____
VILLAGE ENGINEER

COOK COUNTY CLERK

VILLAGE COLLECTOR

STATE OF ILLINOIS)
) SS
COUNTY OF COOK )

I DO HEREBY CERTIFY THAT THERE ARE NO DEFERRED SPECIAL ASSESSMENTS OR UNPAID CURRENT ASSESSMENTS DUE AGAINST THE LAND INCLUDED IN THE ABOVE PLAT.

DATED THIS _____ DAY OF _____, A.D. 20_____.

SIGNED:_____
VILLAGE COLLECTOR

ABROGATION CERTIFICATE - VILLAGE OF PALATINE

THE UNDERSIGNED AUTHORIZED REPRESENTATIVE OF THE VILLAGE OF PALATINE HEREBY RELEASE AND ABROGATE ALL ROADWAY & EASEMENT RIGHTS WITHIN THE LAND LABELED "TO BE LEFT OPEN FOR PUBLIC ROAD" AS SHOWN ON SHEET 1 OF THIS PLAT.

BY:_____ NAME: _____
(SIGNATURE) (PLEASE PRINT)

TITLE:_____ DATE: _____

VILLAGE OF PALATINE EASEMENT:

WHENEVER THE WORDS "PUBLIC UTILITIES" OR "PUBLIC UTILITIES EASEMENT" SHALL APPEAR ON THIS PLAT THE VILLAGE OF PALATINE, A MUNICIPAL CORPORATION, COOK COUNTY, ILLINOIS, AND ITS SUCCESSORS OR ASSIGNS JOINTLY AND SEVERALLY SHALL HOLD A PERPETUAL EASEMENT UNDER, OVER AND ACROSS THE SURFACE OF THE PROPERTY SHOWN WITHIN THE LINES OF THE PLAT MARKED AS SUCH FOR THE INSTALLATION, CONSTRUCTION, USE, REPAIR AND MAINTENANCE OF ALL PUBLIC UTILITY EQUIPMENT, INCLUDING BUT NOT LIMITED TO, FACILITIES USED IN CONNECTION WITH THE TRANSMISSION AND DISTRIBUTION OF ELECTRICITY AND SOUNDS AND SIGNALS, WATER AND SEWAGE MAIN AND PIPING, THE RIGHT TO CUT, TRIM OR REMOVE TREES, BUSHES AND ROOTS, AS MAY BE REASONABLY REQUIRED INCIDENT TO THE RIGHTS HEREIN GIVEN, AND THE RIGHT TO ENTER UPON THE SUBDIVIDED PROPERTY FOR ALL SUCH PURPOSES. OBSTRUCTION SHALL NOT BE PLACED OVER GRANTEES FACILITIES OR IN, UPON OR OVER THE PROPERTY WITHIN THE LINES MARKED "EASEMENT" WITHOUT THE PRIOR WRITTEN CONSENT OR THE GRANTEES. PROVIDED, HOWEVER, THAT SUCH CONSENT OF THE GRANTEE SHALL NOT RELIEVE THE GRANTORS, THEIR SUCCESSORS OR ASSIGNS FROM THE DUTY AND OBLIGATION TO REMOVE ANY SUCH OBSTRUCTIONS AT THEIR SOLE EXPENSE UPON THE DIRECTION OF THE GRANTEE, WHENEVER THE GRANTEE DEEMS SUCH REMOVAL NECESSARY IN ITS SOLE JUDGEMENT TO ENABLE THE GRANTEE TO REPAIR OR MAINTAIN ANY FACILITIES WITHIN THE EASEMENT OR OTHERWISE ALLOW THE GRANTEE FULL USE AND ENJOYMENT OF THE EASEMENT RIGHTS GRANTED HEREUNDER, AFTER INSTALLATION OF ANY SUCH FACILITIES, THE GRADE OF THE SUBDIVIDED PROPERTY SHALL NOT BE ALTERED IN A MANNER SO AS TO UNREASONABLY INTERFERE WITH THE PROPER OPERATION AND MAINTENANCE THEREOF.

ELECTRIC AND TELEPHONE:

A PERMANENT, NONEXCLUSIVE EASEMENT FOR SERVING THE SUBDIVISION AND OTHER PROPERTY WITH ELECTRIC AND COMMUNICATION SERVICE IS HEREBY RESERVED FOR AND GRANTED TO ANY ELECTRIC, TELEPHONE, AND/OR COMMUNICATION COMPANY OR COMPANIES AUTHORIZED BY THE VILLAGE OF PALATINE, ILLINOIS (HEREINAFTER "GRANTEE") JOINTLY AND SEVERALLY, TO INSTALL, OPERATE, MAINTAIN, AND REMOVE, FROM TIME TO TIME, FACILITIES USED IN CONNECTION WITH UNDERGROUND TRANSMISSION AND DISTRIBUTION OF ELECTRICITY AND SOUNDS AND SIGNALS IN, UNDER, ACROSS, ALONG AND UPON THE SURFACE OF THE PROPERTY SHOWN AS AND/OR LABELED AS "UTILITY EASEMENT", "UTILITY AND DRAINAGE EASEMENT", OR "UTILITY AND LANDSCAPING EASEMENT", WITHIN DASHED LINES ON THE ATTACHED PLAT OF SUBDIVISION AND PROPERTY DESIGNATED ON THE PLAT FOR STREETS AND ALLEYS, TOGETHER WITH THE RIGHT TO INSTALL REQUIRED SERVICE CONNECTIONS UNDER THE SURFACE OF EACH LOT TO SERVE IMPROVEMENTS THEREON, THE RIGHT TO CUT, TRIM, OR REMOVE TREES, BUSHES AND ROOTS AS MAY BE REASONABLY REQUIRED INCIDENT TO THE RIGHTS HEREIN GIVEN, AND THE RIGHT TO ENTER UPON THE SUBDIVIDED PROPERTY FOR ALL SUCH PURPOSES. OBSTRUCTIONS SHALL NOT BE PLACED OVER GRANTEE'S FACILITIES OR IN, UPON OR OVER SUCH EASEMENTS WITHOUT THE PRIOR WRITTEN CONSENT OF GRANTEES, SUCH FACILITIES SHALL GENERALLY BY LOCATED UNDERGROUND AND AFTER INSTALLATION OF ANY SUCH FACILITIES; THE GRADE OF THE SUBDIVIDED PROPERTY SHALL NOT BE ALTERED IN A MANNER SO AS TO INTERFERE WITH THE PROPER OPERATION AND MAINTENANCE THEREOF. THE LOCATION OF FACILITIES BY GRANTEES SHALL NOT CONFLICT OR INTERFERE WITH PUBLIC IMPROVEMENTS AND ANY CONFLICTS IN USE SHALL BE SUBJECT TO RESOLUTION AND APPROVAL OF THE GRANTEES.

GAS:

A PERMANENT, NONEXCLUSIVE EASEMENT FOR SERVING THE SUBDIVISION AND OTHER PROPERTY WITH GAS IS HEREBY RESERVED FOR AND GRANTED TO ANY NATURAL GAS COMPANY AUTHORIZED BY THE VILLAGE OF PALATINE, ILLINOIS, IN ALL PLATTED "EASEMENT" AREAS, STREET, ALLEYS AND OTHER PUBLIC WAYS AND PLACES SHOWN ON THIS PLAT, SUCH EASEMENT TO BE FOR THE INSTALLATION, MAINTENANCE, RELOCATION, RENEWAL AND REMOVAL OF GAS MAINS AND APPURTENANCES FOR THE PURPOSE OF SERVING ALL AREAS SHOWN ON THE PLAT AS WELL AS OTHER PROPERTY, WHETHER OR NOT CONTIGUOUS THERETO. NO BUILDINGS OR OTHER STRUCTURES SHALL BE CONSTRUCTED OR ERECTED IN ANY SUCH "EASEMENT" AREAS, STREET, ALLEYS OR PUBLIC WAYS OR PLACES. ALL SUCH GAS MAINS AND APPURTENANCES SHALL BE GENERALLY LOCATED UNDERGROUND AND USE OF SAID EASEMENTS SHALL NOT CONFLICT OR INTERFERE WITH ANY PUBLIC IMPROVEMENTS AND ANY CONFLICTS IN USE SHALL BE SUBJECT TO RESOLUTION AND APPROVAL BY THE VILLAGE.

CABLE TELEVISION:

A PERMANENT, NONEXCLUSIVE EASEMENT IS HEREBY RESERVED FOR AND GRANTED TO THE VILLAGE OF PALATINE, ILLINOIS AND/OR TO ANY CABLE TELEVISION COMPANY OR COMPANIES AUTHORIZED BY THE VILLAGE TO INSTALL CABLE TELEVISION FACILITIES WITHIN THE SUBDIVISION (THE "COMPANY") AND THEIR SUCCESSORS AND ASSIGNS IN, UNDER, ACROSS, ALONG, THROUGH AND UPON THE SURFACE OF THE PROPERTY KNOWN AS AND/OR LABELED AS "UTILITY EASEMENT", WITHIN DASHED LINES ON THE ATTACHED PLAT OF SUBDIVISION FOR THE PURPOSE OF INSTALLING, CONSTRUCTING, OPERATING, INSPECTING, MAINTAINING, REMOVING, REPLACING, RENEWING, ALTERING, AND ENLARGING TELEVISION LINES OR APPURTENANCES FROM TIME TO TIME, AND WITHOUT LIMITATION, SUCH OTHER INSTALLATIONS AS MAY BE REQUIRED TO FURNISH CABLE TELEVISION SERVICE TO THE ATTACHED AREA AND SUCH APPURTENANCES THERETO AS THE VILLAGE AND THE COMPANY MAY DEEM NECESSARY, TOGETHER WITH THE RIGHT OF ACCESS ACROSS THE EASEMENTS INCLUDED IN THE PLAT OF SUBDIVISION FOR GRANTED TO THE VILLAGE AND THE COMPANY TO CUT DOWN, TRIM OR REMOVE ANY TREES, SHRUBS OR OTHER PLANTS THAT INTERFERE WITH THE OPERATION OF OR ACCESS TO SUCH LINES IN, ON, UPON, ACROSS, UNDER OR THROUGH SUCH EASEMENTS, NO PERMANENT BUILDINGS OR TREES SHALL BE PLACED ON SUCH EASEMENTS, BUT SAME MAY BE USED FOR GARDENS, SHRUBS, LANDSCAPING AND OTHER PURPOSES THAT DO NOT THEN OR LATER INTERFERE WITH AFORESAID USES AND RIGHTS, SUCH FACILITIES SHALL BE GENERALLY LOCATED UNDERGROUND AND USE OF SAID EASEMENTS SHALL NOT CONFLICT OR INTERFERE WITH ANY PUBLIC IMPROVEMENTS AND ANY CONFLICTS IN USE SHALL BY SUBJECT TO RESOLUTION AND APPROVAL BY THE VILLAGE.

STATE OF ILLINOIS)
) SS
COUNTY OF COOK )

THIS IS TO CERTIFY THAT I, JERRY P. CHRISTOPH, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, HAVE SURVEYED AND SUBDIVIDED THE FOLLOWING DESCRIBED PROPERTY:

PROPERTY DESCRIPTION:

TRACT II:
THAT PART OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 2, TOWNSHIP 42 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:
COMMENCING AT THE POINT OF INTERSECTION OF THE CENTER LINE OF RAND ROAD WITH THE WEST LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 2, SAID POINT OF INTERSECTION BEING 16.12 FEET SOUTH OF THE NORTHWEST CORNER OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 2; THENCE SOUTHEASTERLY ALONG THE CENTER LINE OF SAID RAND ROAD 951.08 FEET TO A POINT OF BEGINNING; THENCE SOUTHWESTERLY ALONG A LINE EXTENDED TO THE SOUTHWEST CORNER OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 2, A DISTANCE OF 135.00 FEET; THENCE SOUTHEASTERLY PARALLEL TO THE CENTER LINE OF RAND ROAD, 100.00 FEET; THENCE NORTHEASTERLY 135.00 FEET TO THE CENTER LINE OF RAND ROAD, SAID POINT BEING 100.00 FEET SOUTHEASTERLY OF THE POINT OF BEGINNING; THENCE NORTHWESTERLY 100.00 FEET TO THE POINT OF BEGINNING, IN COOK COUNTY, ILLINOIS. (PIN:02-02-101-019)

TRACT III:
THAT PART OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 2, TOWNSHIP 42 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:
COMMENCING AT THE POINT OF INTERSECTION OF THE CENTER LINE OF RAND ROAD WITH THE WEST LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 2, SAID POINT OF INTERSECTION BEING 16.12 FEET SOUTH OF THE NORTHWEST CORNER OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 2; THENCE SOUTHEASTERLY ALONG THE CENTER LINE OF SAID RAND ROAD, 951.08 FEET TO A PLACE OF BEGINNING; THENCE SOUTHWESTERLY IN A STRAIGHT LINE 902.21 FEET TO THE SOUTHWEST CORNER OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 2; THENCE EAST ALONG THE SOUTH LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 2, AFORESAID, 145.26 FEET TO A POINT THAT IS 1097.34 FEET WEST OF THE INTERSECTION OF THE CENTER LINE OF RAND ROAD WITH THE SOUTH LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 2; THENCE NORTHEASTERLY IN A STRAIGHT LINE, 795.89 FEET TO A POINT IN THE CENTER LINE OF RAND ROAD THAT IS 755.42 FEET NORTHWESTERLY OF THE LAST ABOVE DESCRIBED INTERSECTION OF THE CENTER LINE OF RAND ROAD WITH THE SOUTH LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 2; THENCE NORTHWESTERLY ALONG THE CENTER LINE OF RAND ROAD, 100.00 FEET TO THE POINT OF BEGINNING, IN COOK COUNTY, ILLINOIS.

EXCEPTING THEREFROM THE FOLLOWING:
THAT PART OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 2, TOWNSHIP 42 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:
COMMENCING AT THE POINT OF INTERSECTION OF THE CENTER LINE OF RAND ROAD WITH THE WEST LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 2, SAID POINT OF INTERSECTION BEING 16.12 FEET SOUTH OF THE NORTHWEST CORNER OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 2; THENCE SOUTHEASTERLY ALONG THE CENTER LINE OF SAID RAND ROAD 951.08 FEET TO A POINT OF BEGINNING; THENCE SOUTHWESTERLY ALONG A LINE EXTENDED TO THE SOUTHWEST CORNER OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 2, A DISTANCE OF 135.00 FEET; THENCE SOUTHEASTERLY PARALLEL TO THE CENTER LINE OF RAND ROAD, 100.00 FEET; THENCE NORTHEASTERLY 135.00 FEET TO THE CENTER LINE OF RAND ROAD, SAID POINT BEING 100.00 FEET SOUTHEASTERLY OF THE POINT OF BEGINNING; THENCE NORTHWESTERLY 100.00 FEET TO THE POINT OF BEGINNING, IN COOK COUNTY, ILLINOIS.(PIN:02-02-101-020)

TRACT IV:
THAT PART OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 2, TOWNSHIP 42 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:
COMMENCING AT THE POINT OF INTERSECTION OF THE CENTER LINE OF RAND ROAD WITH THE WEST LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 2, SAID POINT OF INTERSECTION BEING 16.12 FEET SOUTH OF THE NORTHWEST CORNER OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 2; THENCE SOUTHEASTERLY ALONG THE CENTER LINE OF SAID RAND ROAD, 851.08 FEET TO A POINT OF BEGINNING; THENCE SOUTHWESTERLY IN A STRAIGHT LINE, 806.47 FEET TO A POINT IN THE WEST LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 2, AFORESAID, SAID POINT BEING 1172.53 FEET SOUTH OF THE ABOVE-DESCRIBED POINT OF INTERSECTION OF THE CENTER LINE OF RAND ROAD WITH THE WEST LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 2; THENCE SOUTH ALONG THE WEST LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 2, 137.77 FEET TO THE SOUTHWEST CORNER OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 2; THENCE NORTHEAST 902.21 FEET TO A POINT IN THE CENTER LINE OF RAND ROAD THAT IS 100.00 FEET SOUTHEAST OF THE POINT OF BEGINNING; THENCE NORTHWESTERLY ALONG THE CENTER LINE OF RAND ROAD, 100.00 FEET TO THE POINT OF BEGINNING, IN COOK COUNTY, ILLINOIS.(PIN:02-02-101-021)

TRACT V:
THAT PART OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 2, TOWNSHIP 42 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN DESCRIBED AS FOLLOWS:
COMMENCING AT THE POINT OF INTERSECTION OF THE CENTER LINE OF RAND ROAD WITH THE WEST LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 2, SAID POINT OF INTERSECTION BEING 16.12 FEET SOUTH OF THE NORTHWEST CORNER OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 2; THENCE SOUTHEASTERLY ALONG THE CENTER LINE OF THE SAID RAND ROAD 751.08 FEET TO THE POINT OF BEGINNING; THENCE SOUTHEASTERLY ALONG THE CENTER LINE OF RAND ROAD, 100 FEET; THENCE SOUTHWESTERLY ON A STRAIGHT LINE 806.47 FEET TO A POINT IN THE WEST LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 2 THAT IS 1172.53 FEET SOUTH OF THE ABOVE DESCRIBED POINT OF INTERSECTION OF THE CENTER LINE OF RAND ROAD AND THE WEST LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 2; THENCE NORTH ALONG THE WEST LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 2, AFORESAID 137.77 FEET; THENCE NORTHEASTERLY IN A STRAIGHT LINE 711.71 FEET TO THE POINT OF BEGINNING, IN COOK COUNTY, ILLINOIS. (PIN:02-02-101-014)

TRACT VI:
THAT PART OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 2, TOWNSHIP 42 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN DESCRIBED AS FOLLOWS: COMMENCING AT A POINT OF INTERSECTION OF CENTER LINE OF RAND ROAD WITH WEST LINE OF NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 2, SAID POINT OF INTERSECTION BEING 16.12 FEET SOUTH OF THE NORTHWEST CORNER OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 2; THENCE SOUTHEASTERLY ALONG THE CENTER LINE OF SAID RAND ROAD 551.08 FEET TO POINT OF BEGINNING; THENCE SOUTHEASTERLY ALONG THE CENTER LINE OF RAND ROAD 200 FEET; THENCE SOUTHWESTERLY IN A STRAIGHT LINE 711.71 FEET TO A POINT IN THE WEST LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 2, BEING 1034.76 FEET SOUTH OF THE ABOVE DESCRIBED POINT OF INTERSECTION OF THE CENTER LINE OF RAND ROAD AND THE WEST LINE OF THE NORTHEAST QUARTER OF NORTHWEST QUARTER OF SAID SECTION 2, AFORESAID, 275.54 FEET; THENCE NORTHEASTERLY IN A STRAIGHT LINE 522.19 FEET TO POINT OF BEGINNING, IN COOK COUNTY, ILLINOIS. (PIN:02-02-101-005)

EXCEPT THE NORTHEASTERLY 50.00 FEET OF THE ABOVE DESCRIBED TRACTS, FOR RAND ROAD PER PLAT OF SURVEY OF PROPERTY ACQUIRED BY PURCHASE OR CONDEMNATION FOR HIGHWAY PURPOSES BY THE STATE OF ILLINOIS RECORDED AS DOCUMENT 12592034.

SAID PROPERTY CONTAINS 344,172 SQUARE FEET OR 7.901 ACRES, MORE OR LESS.

I FURTHER DECLARE THAT STEEL REINFORCING RODS (UNLESS OTHERWISE NOTED) WILL BE SET AT ALL LOT CORNERS.

I FURTHER DECLARE, BASED UPON A REVIEW OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) MAP NUMBER 17031C0181J MAP WITH AN EFFECTIVE DATE OF AUGUST 19, 2008, IT IS OUR CONSIDERED OPINION THAT THIS PROPERTY LIES IN ZONE X (UNSHADED) - AREA OF MINIMAL FLOOD HAZARD AS IDENTIFIED BY SAID F.I.R.M. MAP.

I ALSO CERTIFY THAT THE LAND IS WITHIN THE VILLAGE OF PALATINE, A VILLAGE WHICH HAS ADOPTED A CITY COMPREHENSIVE PLAN AND MAP AND IS EXERCISING THE SPECIAL POWERS AUTHORIZED BY DIVISION 12 OF ARTICLE 11 OF THE ILLINOIS MUNICIPAL CODE AS AMENDED.

GIVEN UNDER OUR HAND AND SEAL THIS _____ DAY OF _____, 20_____ IN ROSEMONT, ILLINOIS.

_____
JERRY P. CHRISTOPH, I.P.L.S. No. 035-3540
LICENSE EXPIRES: 11-30-2024
jchristoph@spacecoinc.com
(VALID ONLY IF EMBOSSED SEAL AFFIXED)

SPACECO, INC., AN ILLINOIS PROFESSIONAL DESIGN FIRM, NUMBER 184-001157

PREPARED FOR:
OREST EXPRESS INC.
221 JOEY DRIVE,
ELK GROVE VILLAGE, IL 60007

MAIL TAX BILLS TO:
OREST EXPRESS INC.
221 JOEY DRIVE,
ELK GROVE VILLAGE, IL 60007

AFTER RECORDING, RETURN TO:
SPACECO INC
9575 WEST HIGGINS ROAD
SUITE 700
ROSEMONT, ILLINOIS 60018

**FOR REVIEW PURPOSES ONLY**

| REVISIONS: |
|---|
| 03/19/2024 |
| |
| |
| |
| |

SPACECO INC.
CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

DATE: 02/05/2024
JOB NO: 11624.03
FILENAME: 11624.03SUBPLAT-01
SHEET 3 OF 3

N:\Projects\11624\11624.03-JLL\SURVEY\11624.03SUBPLAT-01.dgn SHEET 3 User=jchristoph

Attachment: Plat of Subdivision (2240 - 2266 N. Rand Road - FPD Distribution Use)

Kenig,Lindgren,O'Hara,Aboona,Inc.

9575 West Higgins Road, Suite 400 | Rosemont, Illinois 6001
p: 847-518-9990 | f: 847-518-998

MEMORANDUM TO: Vlad Motkalyuk
OREST Express, Inc.

FROM: Luay R. Aboona, PE, PTOE
Principal

DATE: February 7, 2024

SUBJECT: Traffic Impact Statement
Proposed Logistics Facility
Palatine, Illinois

This memorandum summarizes the results and findings of a site traffic evaluation conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. for the proposed OREST Express, Inc. warehousing and transportation services facility to be located in Palatine, Illinois. The site, which currently contains Premier Auto, Contractors Material, Inc., and Auto Land Group, is bounded by Spring Align to the northwest, Rand Road to the northeast, Enterprise to the southeast, Deer Grove Forest Preserve to the west, and UPS to the south. As proposed, the site will be redeveloped with a 58,000 square-foot building with 18 dock positions, an 83-space passenger vehicle parking lot, and 88 trailer parking spaces. Access will be provided via a full-movement access drive and a right-in/right-out access drive. **Figure 1** shows an aerial view of the site.

The purpose of this evaluation is to determine the impact of the traffic generated by the proposed facility on the area roadway system and the adequacy of the proposed access.

## Existing Roadway System Characteristics

The following provides a detailed description of the physical characteristics of the roadways including geometry and traffic control and available average daily traffic volumes along the adjacent area roadways.

*Rand Road (U.S. Route 12)* is a northwest-southeast, principal arterial roadway that provides two lanes in each direction generally divided by a two-way left-turn lane. At its signalized intersection with Lake Cook Road, Rand Road provides dual left-turn lanes, a through lane, and a shared through/right-turn lane on both approaches. At its unsignalized intersections with the access drives south of Lake Cook Road, Rand Road provides two lanes in each direction. For approximately 700 feet south of Lake Cook Road, Rand Road is divided by a barrier median. South of the barrier median, Rand Road is divided by a two-way left-turn lane. This turn lane serves numerous access drives including the Auto Land Group, Central Sod Farm, International Auto Brokers, Enterprise, and Public Storage access drives that are analyzed in this study. Rand Road is under the jurisdiction of the Illinois Department of Transportation (IDOT), is designated as a Strategic Regional Arterial (SRA) route, has a posted speed limit of 35 miles per hour, and carries an annual average daily traffic (AADT) volume of 41,600 vehicles northwest of Lake Cook Road and 24,600 vehicles southeast of Lake Cook Road (IDOT 2021).

Attachment: Traffic Study (2240 - 2266 N. Rand Road - FPD Distribution Use)

**Aerial View of Site** **Figure 1**

Attachment: Traffic Study (2240 - 2266 N. Rand Road - FPD Distribution Use)

*Lake Cook Road* is an east-west, principal arterial roadway that provides two lanes in each direction. At its signalized intersection with Rand Road, Lake Cook Road provides an exclusive left-turn lane, two through lanes, and an exclusive right-turn lane on the eastbound approach and an exclusive left-turn lane, two through lanes, and dual right-turn lanes on the westbound approach. Lake Cook Road is under the jurisdiction of the Cook County Division of Transportation and Highways (CCDOTH), has a posted speed limit of 45 miles per hour, and carries an AADT volume of 17,200 vehicles west of Rand Road and 39,900 vehicles east of Rand Road (IDOT 2022). East of Rand Road, Lake Cook Road is designated as an SRA route.

## Traffic Characteristics of the Proposed Facility

As indicated earlier, the site will be redeveloped with a warehousing and transportation services facility that will contain a 58,000 square-foot building. Access to the facility is proposed to be provided as follows:

- A full-movement access drive on the southwest side of Rand Road located approximately 1,045 feet southeast of Lake Cook Road that will serve the employee parking lots. This access drive will provide one inbound lane and one outbound lane with outbound movements under stop sign control. This access drive will replace an existing access drive at this location. Inbound left-turn movements at this access drive can be accommodated within the existing two-way left-turn lane on Rand Road. Truck access will not be permitted at this access drive and signage indicating as such will be provided.

- A right-in/right-out access drive on the southwest side of Rand Road located approximately 515 feet south of Lake Cook Road that will serve the employee parking lots and truck loading bays. This access drive will provide one inbound lane and one outbound lane restricted to right-turn movements only via the barrier median on Rand Road. Outbound movements will be under stop sign control. This access drive will replace an existing access drive at this location.

It should be noted that the proposed facility will replace five existing access drives along the site frontage, of which two are full-movement access drives. This reduction in conflict points will improve safety and traffic flow on Rand Road. This is especially true given the proximity of the facility to the signalized intersection of Rand Road with Lake Cook Road and the proximity of the other numerous existing access drives on Rand Road. A copy of the preliminary site plan is included in the Appendix.

Attachment: Traffic Study (2240 - 2266 N. Rand Road - FPD Distribution Use)

## Facility Traffic Generation

The number of peak hour trips estimated to be generated by the proposed facility was based on the proposed operations as follows:

OREST Express, Inc. is an asset-based transportation company providing driving transportation and warehousing services between the Midwest and West Coast regions. The facility will have the following characteristics:

- Hours of operation: 7:00 A.M. to 5:00 P.M.
- Employees:
  - Operations office: 28 employees
  - Warehouse: Six employees
  - Maintenance/repair shop: Six employees
- Trucks:
  - Regional: Six trucks leaving 5:00-7:00 A.M. and returning 5:00-7:00 P.M.
  - Over-The-Road (OTR)/Long Distance: 78-80 long distance trucks returning to site every 7-14 days, depending on route and hours of service

**Table 1** shows the estimated vehicle trip generation for the weekday morning and weekday evening peak hours as well as daily traffic.

Table 1
ESTIMATED PEAK HOUR VEHICLE TRIP GENERATION

| Type/Size | Weekday Morning Peak Hour | | | Weekday Evening Peak Hour | | | Daily Trips | | |
|---|---|---|---|---|---|---|---|---|---|
| | In | Out | Total | In | Out | Total | In | Out | Total |
| **OREST Express** | | | | | | | | | |
| Employees | 30 | -- | 30 | -- | 30 | 30 | 40 | 40 | 80 |
| Regional Truck Drivers | 4 | -- | 4 | -- | 4 | 4 | 6 | 6 | 12 |
| *Subtotal* | *34* | -- | *34* | -- | *34* | *34* | *46* | *46* | *92* |
| Regional Trucks | -- | 4 | 4 | 4 | -- | 4 | 6 | 6 | 12 |
| OTR Trucks | -- | 5 | 5 | 5 | -- | 5 | 8 | 8 | 16 |
| *Subtotal* | -- | *9* | *9* | *9* | -- | *9* | *14* | *14* | *28* |
| **Total** | **34** | **9** | **43** | **9** | **34** | **43** | **60** | **60** | **120** |

Attachment: Traffic Study (2240 - 2266 N. Rand Road - FPD Distribution Use)

## Evaluation

When the estimated peak hour traffic volumes anticipated to be generated by the proposed facility are compared to the existing traffic volumes, the facility-generated traffic will not have a detrimental traffic impact on the area roadways based on the following:

- The proposed facility will only generate approximately 34 passenger vehicle trips during the weekday morning and evening peak hours and 92 trips daily.
- The proposed facility will only generate nine truck trips during the peak hours and 28 truck trips daily.
- The total peak hour trips will average than one trip every 80 seconds.
- The facility-generated trips will increase the two-way traffic volume along Rand Road by less than one percent daily.

## Access Evaluation

As previously indicated, access to the site will be provided via two access drives on Rand Road, with the northern access drive restricted to right turns only. A northbound left-turn lane exists on Rand Road to serve the projected inbound left turns. The design of the access drive with one inbound lane and one outbound lane under stop sign control as well as the restriction of the truck traffic to the northern access drive will ensure that efficient and adequate access is provided.

## Conclusions

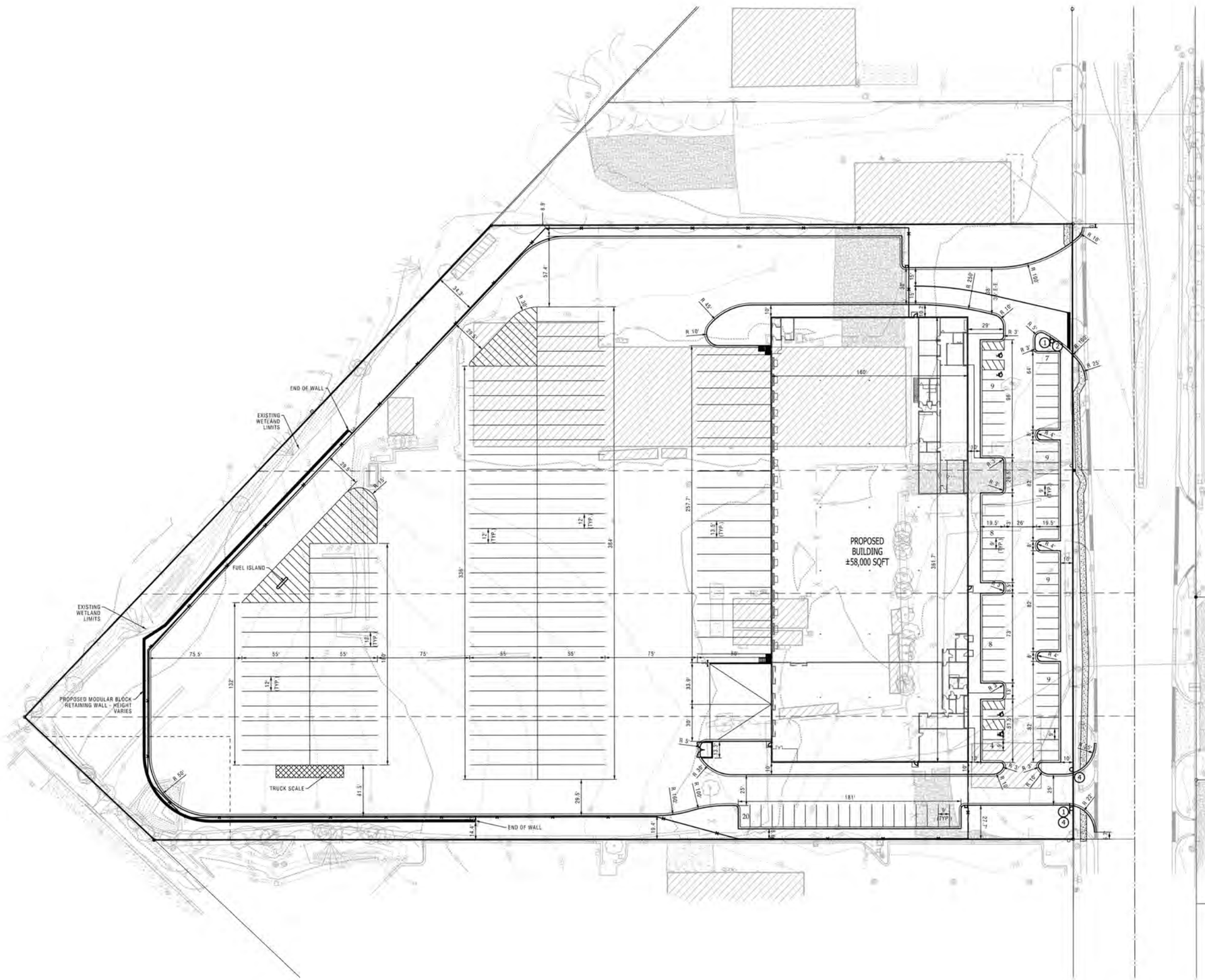
Based on the proposed plan and the preceding evaluation, the following conclusions and recommendations are made:

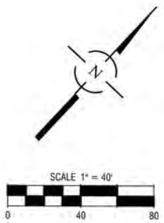
- The traffic that will be generated by the proposed facility will not be significant and can be accommodated by the existing roadway system.
- The majority of truck traffic will be OTR/long distance, which will minimize the amount of daily truck traffic generated by the facility.
- The proposed access drives will be adequate in accommodating traffic entering and exiting the site.
- The reduction in the number of access drives from five to two will reduce traffic conflicts and improve the safety of the traffic flow on Rand Road.

Attachment: Traffic Study (2240 - 2266 N. Rand Road - FPD Distribution Use)

# Appendix

Attachment: Traffic Study (2240 - 2266 N. Rand Road - FPD Distribution Use)




PARKING REQUIREMENTS SUMMARY

ZONING: B-5 DISTRICT

OFFICE REQUIRES 1 SPACE PER 300 SF GFA

WAREHOUSE REQUIRES 1 SPACE PER 1,000 SF GFA

OFFICE: 10,000 SF x $\frac{1 \text{ SPACE}}{300 \text{ SF}}$ = 34 SPACES

WAREHOUSE: 48,000 SF x $\frac{1 \text{ SPACE}}{1{,}000 \text{ SF}}$ = 48 SPACES

82 SPACES REQUIRED

83 SPACES PROVIDED

NOTES:

1. STORMWATER MANAGEMENT DETENTION AND RETENTION VOLUME TO BE PROVIDED WITHIN AN UNDERGROUND VAULT.
2. DIMENSIONS SHOWN ARE FROM BACK OF CURB UNLESS OTHERWISE NOTED

88 TRAILER PARKING STALLS
83 CAR PARKING STALLS
18 DOCK POSITIONS

SIGN LEGEND:

NOTE: ①/② INDICATES SIGN ① MOUNTED ABOVE SIGN ②

CONCEPT SITE PLAN

2240-2266 RAND ROAD

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700

SPACECO I

FILENAME: 11624.03CONN_SITE PL
DATE: 02/02/24
JOB NO. 11624.03
SHEET

Attachment: Traffic Study (2240 - 2266 N. Rand Road - FPD Distribution Use)



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VILLAGE OF PALATINE

# FINAL PLANNED DEVELOPMENT APPLICATION

**Department of Planning & Zoning**
200 E. Wood Street · Palatine, IL · 60067-5339
Telephone: (847) 359-9047 · Fax (847) 963-6247

Petitioner Name

Volodymyr Motkalyuk

Business Name (if applicable)

Orest Express Inc.

Subject Property Address

2240-2266 N Rand Road

All existing land uses on the property:

Commercial - Parking of trucks and tractors, used auto sales facility, building materials business and for office and storage use.

Property acreage and proposed land use:

7.8 Acres - The proposed PD will include a new 1-story +/- 58,000 SF truck terminal building with passenger vehicle parking lot in the front and trailer parking in the rear. The building will include +/- 7,100 SF of office space, +/- 11,000 SF dedicated to truck repair and parts storage,

Attachment: Application (2240 - 2266 N. Rand Road - FPD Distribution Use)

VILLAGE OF PALATINE

# PRELIMINARY & FINAL PLAT OF SUBDIVISION

**Department of Planning & Zoning**
200 E. Wood Street · Palatine, IL · 60067-5339
Telephone: (847) 359-9047 · Fax (847) 963-6247
www.palatine.il.us

**Petitioner Name**

Volodymyr Motkalyuk

**Business Name (if applicable)**

Orest Express Inc.

**Property Owner (if different from petitioner)**

N/A

**Subject Property Address**

2240-2266 N Rand Road

**Property Interest of Petitioner(s):**

Owner
Owner, Lessee, Contract Purchaser, etc.

**All existing land use(s) on the property are:**

Commerical - used auto dealerships (Premier Auto and Auto Land) and construction materials (CMI, Inc.).

**The proposed use(s) on the property, if this petition is approved is (are):**

The proposed PD will include a new 1-story +/- 58,000 SF truck terminal building with passenger vehicle parking lot in the front and trailer parking in the rear. The building will include +/- 7,100 SF of office space, +/- 11,000 SF dedicated to truck repair and parts storage,

**Current zoning of property:** Planned Development

**Size of the property:** 7.8 **acres**

Attachment: Application (2240 - 2266 N. Rand Road - FPD Distribution Use)

**State the specific action requested:**

Consolidate 6 parcels into one.

Attachment: Application (2240 - 2266 N. Rand Road - FPD Distribution Use)

NOTES:
THIS SURVEY REFLECTS MATTERS OF TITLE AS LISTED ON A COMMITMENT FOR TITLE INSURANCE BY STEWART TITLE GUARANTY COMPANY, COMMITMENT NUMBER: 2198080 WITH A COMMITMENT DATE OF NOVEMBER 20, 2023.

UNDERGROUND UTILITIES ARE SHOWN BY USING PHYSICAL EVIDENCE FOUND ON THE SURFACE AND/OR FROM UTILITY COMPANY FIELD STAKES, AND/OR ENGINEERING DESIGN PLANS. THEREFORE, THEIR LOCATIONS ARE APPROXIMATE AND SUSPECTED, AND MAY NOT BE COMPLETELY ACCURATE. FOR MORE ACCURATE LOCATION, FIELD EXCAVATE. OTHER UTILITIES NOT SHOWN MAY EXIST. NO UNDERGROUND UTILITIES WERE LOCATED. BEFORE DIGGING CALL J.U.L.I.E. AT 1-800-892-0123.

ALL DIMENSIONS ARE IN FEET AND DECIMAL PARTS THEREOF. NO DISTANCES OR ANGLES SHOWN HEREON MAY BE ASSUMED BY SCALING.

THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY IN ADDITION TO THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS.

SPACECO, INC IS AN ILLINOIS PROFESSIONAL DESIGN FIRM REGISTERED UNDER LICENSE NUMBER 184-001157.

NO CEMETERIES, GRAVESITES, OR BURIAL GROUNDS WERE DISCLOSED IN THE RECORD DOCUMENTS PROVIDED TO THE SURVEYOR OR OBSERVED IN THE PROCESS OF CONDUCTING THIS SURVEY. ADDITIONALLY, THIS SURVEYOR HAS NO PRIOR KNOWLEDGE OF CEMETERIES, GRAVESITES, OR BURIAL GROUNDS BEING LOCATED ON THE SURVEYED PROPERTY.

TAX P.I.N.S (PER TITLE COMMITMENT & DUPAGE COUNTY GIS):
PINS:
02-02-101-019 (TRACT II)
02-02-101-020 (TRACT III)
02-02-101-021 (TRACT IV)
02-02-101-013 (TRACT V)
02-02-101-014 (TRACT V)
02-02-101-005 (TRACT VI)

MONUMENTS WERE FOUND/SET AT THE PARCEL CORNERS AS SHOWN.
(TABLE A ITEM 1)

ADDRESS: (PER COOK COUNTY GIS WEBSITE )
2240 -2266 N RAND ROAD
PALATINE, IL 60074
(TABLE A ITEM 2)

BASED UPON A REVIEW OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) MAP NUMBER 17031C0043J MAP WITH AN EFFECTIVE DATE/MAP REVISED DATE OF AUGUST 19, 2008, IT IS OUR CONSIDERED OPINION THAT THIS PROPERTY LIES IN ZONE X (UNSHADED) - AREA OF MINIMAL FLOOD HAZARD AS IDENTIFIED BY SAID F.I.R.M. MAP.
(TABLE A ITEM 3)

THE PROPERTY SURVEYED CONTAINS 344,172 SQUARE FEET, OR 7.901 ACRES, MORE OR LESS.
(TABLE A ITEM 4)

PROPERTY IS CURRENTLY ZONED P PLANNED UNIT DEVELOPMENT DISTRICT PER THE VILLAGE OF PALATINE ZONING MAP LAST DATED FEBRUARY 2, 2023. A CURRENT ZONING REPORT WAS NOT PROVIDED.
(TABLE A ITEMS 6A)

SUBSTANTIAL FEATURES ARE SHOWN HEREON.
(TABLE A ITEM 8)

THERE ARE A TOTAL OF 54 FADED STRIPED PARKING SPACES ON THE SURVEYED PROPERTY.
(TABLE A ITEM 9)

UTILITIES SHOWN HEREON WERE LOCATED AS PART OF THE SURVEY FOR THE SUBJECT PARCEL.
(TABLE A ITEM 11)

NAME OF THE ADJOINERS SHOWN HEREON ARE CURRENT OWNERS AND/OR TAXPAYERS AS LISTED ON THE COOK COUNTY GIS WEBSITE ACCESSED ON DECEMBER 26, 2023.
(TABLE A ITEM 13)

THE DISTANCE TO THE NEAREST INTERSECTION IS APPROXIMATELY 550 FEET NORTHWESTERLY TO THE INTERSECTION OF RAND ROAD AND LAKE COOK ROAD. (TABLE A ITEM 14)

THERE IS NO OBSERVABLE EVIDENCE OF EARTH MOVING WORK, BUILDING CONSTRUCTION, OR BUILDING ADDITIONS WITHIN RECENT MONTHS.
(TABLE A ITEM 16)

THIS SURVEYOR KNOWS OF NO CHANGES IN STREET RIGHT OF WAY LINES EITHER COMPLETED OR PROPOSED AND AVAILABLE FROM THE CONTROLLING JURISDICTION. THERE IS NO OBSERVABLE EVIDENCE OF RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS.
(TABLE A ITEM 17)

THE DOCUMENTS PROVIDED TO THE OR OBTAINED BY THE SURVEYOR AS PART OF THE SURVEY PURSUANT TO SECTIONS 5 AND 6 OF THE ALTA/NSPS LAND TITLE 2016 STANDARDS DO NOT DISCLOSE ANY PLOTTABLE OFFSITE (I.E., APPURTENANT) EASEMENTS OR SERVITUDES.
(TABLE A ITEM 18)

PROPERTY DESCRIPTION:

TRACT II:
THAT PART OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 2, TOWNSHIP 42 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: COMMENCING AT THE POINT OF INTERSECTION OF THE CENTER LINE OF RAND ROAD WITH THE WEST LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 2, SAID POINT OF INTERSECTION BEING 16.12 FEET SOUTH OF THE NORTHWEST CORNER OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 2; THENCE SOUTHEASTERLY ALONG THE CENTER LINE OF SAID RAND ROAD 951.08 FEET TO A POINT OF BEGINNING; THENCE SOUTHWESTERLY ALONG A LINE EXTENDED TO THE SOUTHWEST CORNER OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 2, A DISTANCE OF 135.00 FEET; THENCE SOUTHEASTERLY PARALLEL TO THE CENTER LINE OF RAND ROAD, 100.00 FEET; THENCE NORTHEASTERLY 135.00 FEET TO THE CENTER LINE OF RAND ROAD, SAID POINT BEING 100.00 FEET SOUTHEASTERLY OF THE POINT OF BEGINNING; THENCE NORTHWESTERLY 100.00 FEET TO THE POINT OF BEGINNING, IN COOK COUNTY, ILLINOIS. (PIN:02-02-101-019)

TRACT III:
THAT PART OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 2, TOWNSHIP 42 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: COMMENCING AT THE POINT OF INTERSECTION OF THE CENTER LINE OF RAND ROAD WITH THE WEST LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 2, SAID POINT OF INTERSECTION BEING 16.12 FEET SOUTH OF THE NORTHWEST CORNER OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 2; THENCE SOUTHEASTERLY ALONG THE CENTER LINE OF SAID RAND ROAD, 951.08 FEET TO A PLACE OF BEGINNING; THENCE SOUTHWESTERLY IN A STRAIGHT LINE 902.21 FEET TO THE SOUTHWEST CORNER OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 2; THENCE EAST ALONG THE SOUTH LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 2, AFORESAID, 145.26 FEET TO A POINT THAT IS 1097.34 FEET WEST OF THE INTERSECTION OF THE CENTER LINE OF RAND ROAD WITH THE SOUTH LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 2; THENCE NORTHEASTERLY IN A STRAIGHT LINE, 795.89 FEET TO A POINT IN THE CENTER LINE OF RAND ROAD THAT IS 755.42 FEET NORTHWESTERLY OF THE LAST ABOVE DESCRIBED INTERSECTION OF THE CENTER LINE OF RAND ROAD WITH THE SOUTH LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 2; THENCE NORTHWESTERLY ALONG THE CENTER LINE OF RAND ROAD, 100.00 FEET TO THE POINT OF BEGINNING, IN COOK COUNTY, ILLINOIS.

EXCEPTING THEREFROM THE FOLLOWING:
THAT PART OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 2, TOWNSHIP 42 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: COMMENCING AT THE POINT OF INTERSECTION OF THE CENTER LINE OF RAND ROAD WITH THE WEST LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 2, SAID POINT OF INTERSECTION BEING 16.12 FEET SOUTH OF THE NORTHWEST CORNER OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 2; THENCE SOUTHEASTERLY ALONG THE CENTER LINE OF SAID RAND ROAD 951.08 FEET TO A POINT OF BEGINNING; THENCE SOUTHWESTERLY ALONG A LINE EXTENDED TO THE SOUTHWEST CORNER OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 2, A DISTANCE OF 135.00 FEET; THENCE SOUTHEASTERLY PARALLEL TO THE CENTER LINE OF RAND ROAD, 100.00 FEET; THENCE NORTHEASTERLY 135.00 FEET TO THE CENTER LINE OF RAND ROAD, SAID POINT BEING 100.00 FEET SOUTHEASTERLY OF THE POINT OF BEGINNING; THENCE NORTHWESTERLY 100.00 FEET TO THE POINT OF BEGINNING, IN COOK COUNTY, ILLINOIS.(PIN:02-02-101-020)

TRACT IV:
THAT PART OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 2, TOWNSHIP 42 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:
COMMENCING AT THE POINT OF INTERSECTION OF THE CENTER LINE OF RAND ROAD WITH THE WEST LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 2, SAID POINT OF INTERSECTION BEING 16.12 FEET SOUTH OF THE NORTHWEST CORNER OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 2; THENCE SOUTHEASTERLY ALONG THE CENTER LINE OF SAID RAND ROAD, 851.08 FEET TO A POINT OF BEGINNING; THENCE SOUTHWESTERLY IN A STRAIGHT LINE, 806.47 FEET TO A POINT IN THE WEST LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 2, AFORESAID, SAID POINT BEING 1172.53 FEET SOUTH OF THE ABOVE-DESCRIBED POINT OF INTERSECTION OF THE CENTER LINE OF RAND ROAD WITH THE WEST LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 2; THENCE SOUTH ALONG THE WEST LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 2, 137.77 FEET TO THE SOUTHWEST CORNER OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 2; THENCE NORTHEAST 902.21 FEET TO A POINT IN THE CENTER LINE OF RAND ROAD THAT IS 100.00 FEET SOUTHEAST OF THE POINT OF BEGINNING; THENCE NORTHWESTERLY ALONG THE CENTER LINE OF RAND ROAD, 100.00 FEET TO THE POINT OF BEGINNING, IN COOK COUNTY, ILLINOIS.(PIN:02-02-101-021)

TRACT V:
THAT PART OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 2, TOWNSHIP 42 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN DESCRIBED AS FOLLOWS:
COMMENCING AT THE POINT OF INTERSECTION OF THE CENTER LINE OF RAND ROAD WITH THE WEST LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 2, SAID POINT OF INTERSECTION BEING 16.12 FEET SOUTH OF THE NORTHWEST CORNER OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 2; THENCE SOUTHEASTERLY ALONG THE CENTER LINE OF THE SAID RAND ROAD 751.08 FEET TO THE POINT OF BEGINNING; THENCE SOUTHEASTERLY ALONG THE CENTER LINE OF RAND ROAD, 100 FEET; THENCE SOUTHWESTERLY ON A STRAIGHT LINE 806.47 FEET TO A POINT IN THE WEST LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 2 THAT IS 1172.53 FEET SOUTH OF THE ABOVE DESCRIBED POINT OF INTERSECTION OF THE CENTER LINE OF RAND ROAD WITH THE WEST LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 2; THENCE NORTH ALONG THE WEST LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 2, AFORESAID 137.77 FEET; THENCE NORTHEASTERLY IN A STRAIGHT LINE 711.71 FEET TO THE POINT OF BEGINNING, IN COOK COUNTY, ILLINOIS. (PIN:02-02-101-014)

TRACT VI:
THAT PART OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 2, TOWNSHIP 42 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN DESCRIBED AS FOLLOWS: COMMENCING AT A POINT OF INTERSECTION OF CENTER LINE OF RAND ROAD WITH WEST LINE OF NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 2, SAID POINT OF INTERSECTION BEING 16.12 FEET SOUTH OF THE NORTHWEST CORNER OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 2; THENCE SOUTHEASTERLY ALONG THE CENTER LINE OF RAND ROAD 200 FEET; THENCE SOUTHWESTERLY IN A STRAIGHT LINE 711.71 FEET TO A POINT IN THE WEST LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 2, BEING 1034.76 FEET SOUTH OF THE ABOVE DESCRIBED POINT OF INTERSECTION OF THE CENTER LINE OF RAND ROAD AND THE WEST LINE OF THE NORTHEAST QUARTER OF NORTHWEST QUARTER OF SAID SECTION 2, AFORESAID, 275.54 FEET; THENCE NORTHEASTERLY IN A STRAIGHT LINE 522.19 FEET TO POINT OF BEGINNING, IN COOK COUNTY, ILLINOIS. (PIN:02-02-101-005)

NOTES FROM TITLE COMMITMENT:

17. GRANT OF EASEMENT RECORDED AUGUST 28, 1946 AS DOCUMENT 13879675 MADE BY BEATRICE AND FELIX J. BONK TO PUBLIC SERVICE COMPANY OF NORTHERN ILLINOIS, GRANTING THE RIGHT TO LAY, MAINTAIN AND OPERATE AN 18-INCH GAS MAIN OVER, UPON, ALONG AND UNDER THE SOUTHWEST SIDE OF THE PUBLIC HIGHWAY KNOWN AS RAND ROAD, WHICH EXTENDS ALONG THE NORTHEAST SIDE OF THE LAND. (TRACT VI)
(SURVEYOR'S NOTE: THIS APPEARS TO FALL WITHIN THE ADJACENT RAND ROAD RIGHT OF WAY. NO EXACT LOCATION AND/OR WIDTH IS PROVIDED. SEE DOCUMENTS FOR PARTICULARS.)

18. GRANT OF EASEMENT DATED JUNE 28, 1946 AND RECORDED JULY 17, 1946 AS DOCUMENT 13846670 MADE BY FRANK C. GREENWOOD AND ELNORA GREENWOOD, HIS WIFE, TO PUBLIC SERVICE COMPANY OF NORTHERN ILLINOIS, A CORPORATION OF ILLINOIS GRANTING THE RIGHT TO LAY, MAINTAIN AND OPERATE AN 18-INCH GAS MAIN AND NECESSARY APPURTENANCES IN, UPON, UNDER AND ALONG THE SOUTHWEST SIDE OF THE PUBLIC HIGHWAY KNOWN AS RAND ROAD WHICH EXTENDS ALONG THE NORTHEAST SIDE OF THE LAND. (TRACT V)
(SURVEYOR'S NOTE: THIS APPEARS TO FALL WITHIN THE ADJACENT RAND ROAD RIGHT OF WAY. NO EXACT LOCATION AND/OR WIDTH IS PROVIDED. SEE DOCUMENTS FOR PARTICULARS.)

19. GRANT OF EASEMENT JULY 19, 1946, AS DOCUMENT 13848909 MADE BY WILLIAM H. WENDLAND AND ANNA WENDLAND, HIS WIFE, TO PUBLIC SERVICE COMPANY OF NORTHERN ILLINOIS, A CORPORATION OF ILLINOIS GRANTING THE RIGHT TO LAY, MAINTAIN AND OPERATE AN 18-INCH GAS MAIN AND NECESSARY APPURTENANCES IN, UPON, UNDER AND ALONG THE SOUTHWEST SIDE OF THE PUBLIC HIGHWAY KNOWN AS RAND ROAD WHICH EXTENDS ALONG THE NORTHEAST SIDE OF THE LAND. (TRACTS II AND III)
(SURVEYOR'S NOTE: THIS APPEARS TO FALL WITHIN THE ADJACENT RAND ROAD RIGHT OF WAY. NO EXACT LOCATION AND/OR WIDTH IS PROVIDED. SEE DOCUMENTS FOR PARTICULARS.)

20. RIGHTS OF THE PUBLIC IN AND TO THAT PART OF THE LAND FALLING IN THAT PART OF THE WEST 33 FEET OF THE NORTHEAST 1/4 OF THE NORTHWEST 1/4 OF SAID SECTION 2. SAID TRACT TO BE LEFT OPEN FOR PUBLIC ROADS, AS DISCLOSED BY DEED FROM CHICAGO TITLE & TRUST COMPANY AS TRUSTEE UNDER TRUST NUMBER 19745 TO PETER J. LIND AND THYRA L. LIND, HIS WIFE, DATED NOVEMBER 14, 1933 AND RECORDED APRIL 13, 1934 AS DOCUMENT 11385459 AND IN SUBSEQUENT DEEDS IN THE CHAIN OF TITLE. (TRACTS V AND VI)
(SURVEYOR'S NOTE: THIS EXCEPTION AFFECTS THE SURVEYED PROPERTY (TRACT V). THAT PORTION OF THE WEST 33 FEET IS SHOWN. SEE DOCUMENT FOR DETAILS.)

21. RIGHTS OF THE PUBLIC, THE STATE OF ILLINOIS AND THE MUNICIPALITY IN AND TO THAT PART OF THE LAND FALLING IN THE WEST 33 FEET AND IN THE SOUTH 33 FEET OF THE NORTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 2 AFORESAID, TO BE LEFT OPEN FOR USE AS A PUBLIC ROAD; WHICH RIGHTS WERE SET FORTH IN THE TRUSTEE'S DEED FROM CHICAGO TITLE AND TRUST COMPANY, AS TRUSTEE UNDER TRUST NO. 19745, TO MARION BAIR, RECORDED APRIL 3, 1931, AS DOCUMENT 10874958, AND IN SUBSEQUENT DEEDS IN THE CHAIN OF TITLE. (TRACTS III AND V)
(SURVEYOR'S NOTE: THIS EXCEPTION AFFECTS THE SURVEYED PROPERTY (TRACT IV & III) AND THAT PORTION OF THE WEST 33 FEET AND THE SOUTH 33 FEET ARE SHOWN. SEE DOCUMENT FOR DETAILS.)

22. TERMS AND PROVISIONS OF THE ORDINANCE/RESOLUTION BY THE CITY OF PALATINE FOR ANNEXATION, AS SET FORTH IN THE INSTRUMENT RECORDED 07/13/2007, AS INSTRUMENT NO. 0719415047 AND 0719415050. (TRACTS I, II, III, IV, V AND VI)
(SURVEYOR'S NOTE: THIS EXCEPTION AFFECTS THE SURVEYED PROPERTY BUT CONTAINS NO PLOTTABLE ITEMS AND/OR RESTRICTIONS. SEE DOCUMENT FOR PARTICULARS)

23. TERMS AND PROVISIONS OF EASEMENT AGREEMENT RECORDED AS DOCUMENT 1522522031.
(SURVEYOR'S NOTE: THIS EXCEPTION AFFECTS THE SURVEYED PROPERTY. THE APPROXIMATE LOCATION OF THE EASEMENT IS SHOWN. NO DIMENSIONS OR EASEMENT DESCRIPTION WAS CONTAINED IN SAID DOCUMENT. SEE DOCUMENT FOR PARTICULARS. IT HAS COME TO OUR ATTENTION THAT A NEW EASEMENT DOCUMENT HAS BEEN PREPARED AND THAT A RELEASE/VACATION WAS PREVIOUSLY PREPARED FOR THIS EXCEPTION.)

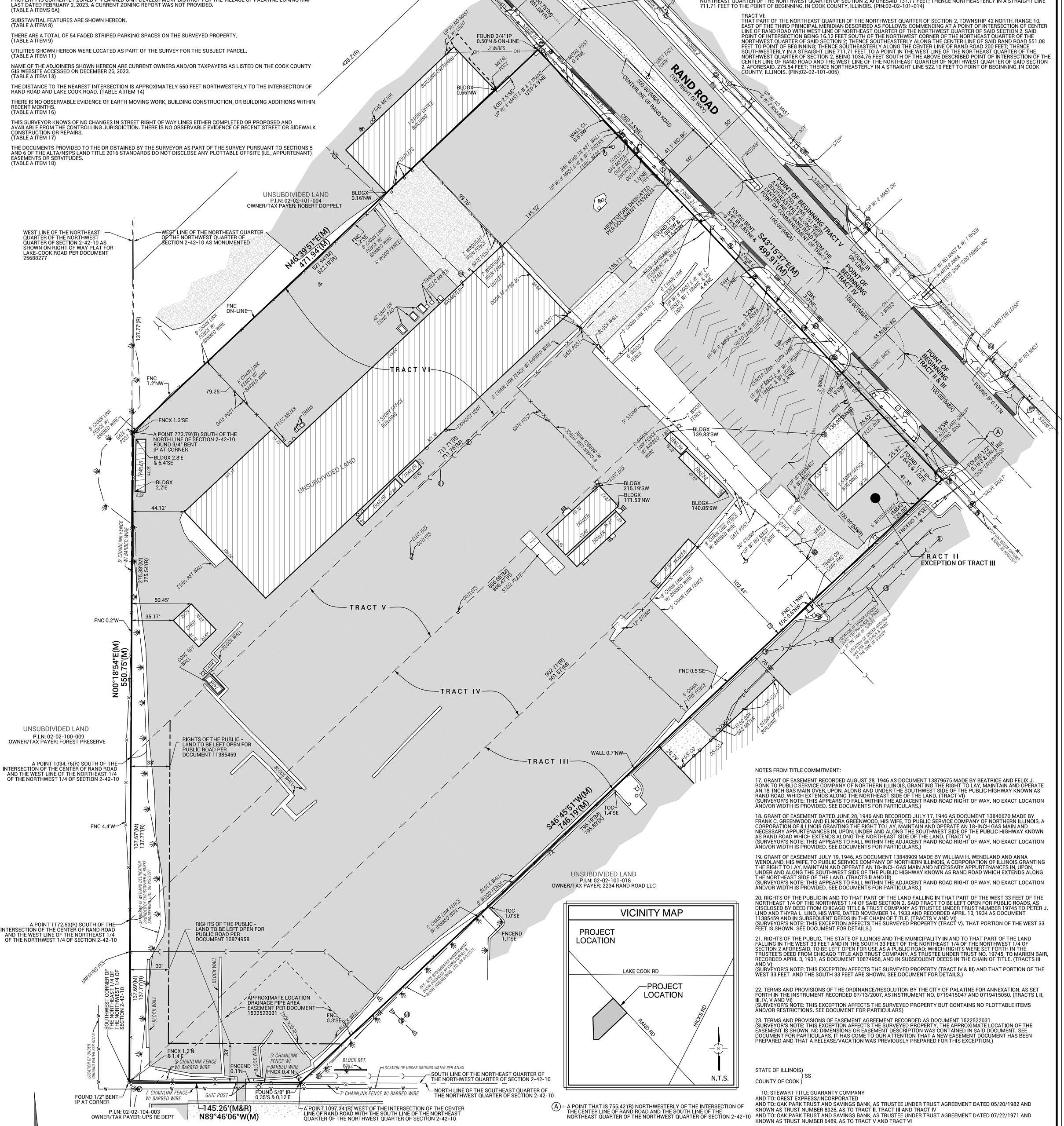
STATE OF ILLINOIS )
) SS
COUNTY OF COOK )

TO: STEWART TITLE GUARANTY COMPANY
AND TO: OREST EXPRESS/INCORPORATED
AND TO: OAK PARK TRUST AND SAVINGS BANK, AS TRUSTEE UNDER TRUST AGREEMENT DATED 05/20/1982 AND KNOWN AS TRUST NUMBER 8926, AS TO TRACT II, TRACT III AND TRACT IV
AND TO: OAK PARK TRUST AND SAVINGS BANK, AS TRUSTEE UNDER TRUST AGREEMENT DATED 07/22/1971 AND KNOWN AS TRUST NUMBER 6489, AS TO TRACT V AND TRACT VI

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 6(a), 6(b), 7(a), 8, 9, 11(a), 13, 14, 16, 17, 18 & 19 OF TABLE "A" THEREOF. THE FIELDWORK WAS COMPLETED ON DECEMBER 14, 2024.

GIVEN UNDER MY HAND AND SEAL THIS ___ DAY OF _____, 2024 IN ROSEMONT, ILLINOIS.

JERRY P. CHRISTOPH, I.P.L.S. No. 035-3540
LICENSE EXPIRES: 11-30-2024
jchristoph@spacecoinc.com


WEST LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 2-42-10 AS SHOWN ON RIGHT OF WAY PLAT FOR LAKE-COOK ROAD PER DOCUMENT 25688277
16.12'(R)
16.00'(M)
POINT OF COMMENCEMENT TRACT II, III, IV, V & VI
NORTH LINE OF THE NORTHWEST QUARTER OF SECTION 2-42-10
WEST LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 2-42-10 AS MONUMENTED
FOUND IR W/CAP 0.09'S
FOUND 3/4" IP 0.26'N
RAND ROAD (100' RIGHT OF WAY)
CENTERLINE OF RAND ROAD
200.00'(M&R)
41.1' BC-BC
50'
POINT OF BEGINNING TRACT VI
A POINT 550.75'(M) SOUTH OF THE INTERSECTION OF THE CENTER LINE OF RAND ROAD AND THE WEST LINE OF THE NORTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 2-42-10
POINT OF BEGINNING TRACT V
A POINT 750.75'(M) SOUTH OF THE INTERSECTION OF THE CENTER LINE OF RAND ROAD AND THE WEST LINE OF THE NORTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 2-42-10
951.08'(R)
950.75'(M)
100.00'(M&R)
POINT OF BEGINNING TRACT IV
POINT OF BEGINNING TRACT II & III
65.8'BC-BC
S43°15'37"E(M)
499.91'(M)
N46°39'51"E(M)
471.94'(M)
521.94'(M)
522.19'(R)
UNSUBDIVIDED LAND
P.I.N: 02-02-101-004
OWNER/TAX PAYER: ROBERT DOPPELT
TRACT VI
TRACT V
TRACT IV
TRACT III
TRACT II
EXCEPTION OF TRACT III
UNSUBDIVIDED LAND
P.I.N: 02-02-101-018
OWNER/TAX PAYER: 2234 RAND ROAD LLC
UNSUBDIVIDED LAND
P.I.N: 02-02-100-009
OWNER/TAX PAYER: FOREST PRESERVE
P.I.N: 02-02-104-003
OWNER/TAX PAYER: UPS RE DEPT
N00°18'54"E(M)
550.75'(M)
S46°45'51"W(M)
746.19'(M)
796.19'(M)
795.89'(R)
N89°46'06"W(M)
145.26'(M&R)
A POINT 1034.76(R) SOUTH OF THE INTERSECTION OF THE CENTER OF RAND ROAD AND THE WEST LINE OF THE NORTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 2-42-10
A POINT 1172.53(R) SOUTH OF THE INTERSECTION OF THE CENTER OF RAND ROAD AND THE WEST LINE OF THE NORTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 2-42-10
A POINT 1097.34'(R) WEST OF THE INTERSECTION OF THE CENTER LINE OF RAND ROAD WITH THE SOUTH LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 2-42-10
SOUTH LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 2-42-10
NORTH LINE OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 2-42-10
RIGHTS OF THE PUBLIC - LAND TO BE LEFT OPEN FOR PUBLIC ROAD PER DOCUMENT 11385459
RIGHTS OF THE PUBLIC - LAND TO BE LEFT OPEN FOR PUBLIC ROAD PER DOCUMENT 10874958
APPROXIMATE LOCATION DRAINAGE PIPE AREA EASEMENT PER DOCUMENT 1522522031
OFF- SITE STORMWATER MANAGEMENT BASIN PROVIDED BY CHRISTOPHER B. BURKE ENGINEERING, LTD. ON 8/5/2021.
APPROXIMATE WETLAND DELINEATION PROVIDED BY CHRISTOPHER B. BURKE ENGINEERING, LTD. ON 8/5/2021.
LOCATION OF UNDER GROUND GAS PER PIN FLAGS & PAINT AT THE TIME OF SURVEY
LOCATION OF UNDER GROUND ELEC. PER PIN FLAGS & PAINT AT THE TIME OF SURVEY
LOCATION OF UNDER GROUND WATER PER ATLAS
FOUND 3/4" IP 0.50'N & ON-LINE
FOUND IR ON LINE
FOUND 1" IP 1.08'SW & 14.64'NE
FOUND BENT 0.48'(R) 0.85'NE & 0.39'SE
FOUND 1/2" IP 0.16'S & ON-LINE SIGN "ENTERPRISE"
FOUND 1/2" IP 3.64'S & 1.05'E
FOUND 1/2" BENT IP AT CORNER
FOUND 5/8" IR 0.35'S & 0.12'E
FOUND IP 0.11'N
A POINT 773.79'(R) SOUTH OF THE NORTH LINE OF SECTION 2-42-10 FOUND 3/4" BENT IP AT CORNER
BUILDING OVERHANG
1 STORY OFFICE BUILDING
GAS METER
BLDGX 0.66'NW
FOC 2.5'SE
UP W/ 8' MAST E-W & 2 TRANS UTP 2.9'NE
BLDGX 0.16'NW
FNC 1.2'SE
6' CHAIN LINK FENCE W/ BARBED WIRE
6' WOOD FENCE
7' WROUGHT IRON FENCE
GATE POST
OUTLETS
99.76'
135.52'
135.11'
HEREFOORE DEDICATED PER DOCUMENT 12592034
WALL CL 0.5'SW
RAIL ROAD TIE RET. WALL
UP W/ 8' MAST E-W & W/ 2 RISERS CONC. BASE
GAS METER
GAS WARNING ANCHOR
1.0'NE
CBS 2.5'NE
CBS 3.0'NE
"ONLY EAST TURN"
"MEDIAN"
"STOP"
SIGN "AVAILABLE COMMERCIAL REAL ESTATE"
6' CHAIN LINK FENCE
UP W/ 8' MAST E-W & W/ 2 RISER, W/ 1 TRANS & W/ LIGHT 4.4'NE
FHY 1.7'NE
3.2'NE
UP W/ 8' MAST E-W & W/ 1 RISER
"AUTO LAND GROUP"
LIP 1.7'SW
LIP 1.9'SW
"CENTER LANE - TURN LANE"
UP W/ 4' MAST E-W, W/ 1 RISER W/ TRANS. & W/ LIGHT 2.4'NE
UP W/ NO MAST & W/ 1 RISER
PLANTER AREA
WOOD SIGN "SOD FARMS INC"
SIGN "LAND FOR LEASE"
UP W/ NO MAST
UP W/ 4 MAST SW
UP W/ NO MAST & W/ 2 RISERS
UP W/ NO MAST & W/ LIGHT
UP W/ NO MAST & W/ LIGHT
UP W/ NO MAST
1 WIRE
2 WIRES
OH
STUMP
SCUM
SCV
TRAFFIC SIGNAL BOX
ELEC METER
TRANS
BLDGX 139.83'SW
BLDGX 140.05'SW
BLDGX 215.19'SW
BLDGX 171.53'NW
BLDGX 2.8'E & 6.4'SE
BLDGX 2.2'E
TRAILER
TRAILER CR
ELEC BOX
ELEC METER
EXHAUST VENT
8' CHAIN LINK FENCE W/ BARBED WIRE
9' CHAIN LINK FENCE W/ BARBED WIRE
7' WOOD FENCE
6' WOOD FENCE
BLOCK WALL
5' CHAIN LINK FENCE
5' CHAINLINK FENCE W/ BARBED WIRE
CONC RET WALL
CONC. BASE
SHED
TANK
MWP
TOC 1.4'SE
TOC 1.0'SE
FNCEND 1.1'SE
FNCEND 1.4'SE
FNC 0.2'W
FNC 1.2'NW
FNCX 1.3'SE
FNC 4.4'W
FNC 0.5'SE
FNC 1.1'NW
EOC 0.6'NW
FNCX 1.2'N & 1.4'E
FNCEND 0.1'N
FNCX 0.4'N
FNC 0.3'SE
WALL 0.7'NW
BLOCK RET. WALL
"VALVE VAULT"
"WATER VALVE"
"SIGN"
"MAILBOX"
"TRANSFORMER"
"TRANS ON CONC PAD"
"SHED"
"GATE POST"
"6' CHAIN LINK FENCE W/ BARBED WIRE"
"5' CHAIN LINK FENCE"
"36" STUMP"
"12" STUMP"
"9" STUMP"
"7" WOOD FENCE"
"1 STORY OFFICE BUILDING"
"ELEC BOX"
"GAS METER"
"DS-CO"
"UP W/ NO MAST & W/ LIGHT"
"UP W/ NO MAST & W/ 2 RISERS"
"UP W/ NO MAST & W/ LIGHT"
"UP W/ NO MAST & W/ 1 WIRE"
"UP W/ NO MAST & W/ 1 WIRE"
"UP W/ NO MAST & W/ 1 RISER"
"UP W/ NO MAST & W/ 1 RISER"
"UP W/ NO MAST & W/ 1 RISER

# ORDINANCE NO. O-69-22

# AN ORDINANCE GRANTING FINAL PLANNED DEVELOPMENT APPROVAL FOR 2240-2296 N. RAND ROAD

**Published in pamphlet form by authority of the Mayor and Village Council of the Village of Palatine On July 11, 2022**

Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)

# ORDINANCE NO. O-69-22

## AN ORDINANCE GRANTING FINAL PLANNED DEVELOPMENT APPROVAL FOR 2240-2296 N. RAND ROAD

**WHEREAS**, upon petition of owners of said property, a Public Hearing was held by the Plan Commission of the Village of Palatine on June 21, 2022 and in accordance with the Zoning Ordinance of the Village of Palatine, in such case made and provided, and said Plan Commission, having made its findings in a report to the Mayor and Village Council of the Village of Palatine regarding a request for a Final Planned Development to permit a warehouse/distribution/light manufacturing development on the following legally described property:

SEE ATTACHED LEGAL DESCRIPTION

Commonly known as 2240, 2242, 2250, 2260, 2266, and 2296 N. Rand Road

PIN: # 02-02-101-019-0000; 02-02-101-020-0000; 02-02-101-021-0000; 02-02-101-013-0000; 02-02-101-014-0000; 02-02-101-004-0000; and 02-02-101-005-0000

**NOW, THEREFORE, BE IT ORDAINED**, by the Mayor and Village Council of the Village of Palatine, Cook County, Illinois, acting in the exercise of their home rule power:

SECTION 1: That the Preliminary and Final Planned Development is hereby approved, to permit a warehouse/distribution/light manufacturing development is hereby granted, subject to the following conditions:

1. The development shall substantially conform to the engineering plans by Spaceco., INC., dated March 22, 2022, as revised, the architectural plans by Ware Malcomb, date April 3, 2022, as revised, the KLOA Traffic Study, and the landscaping plans by Kathyrn Talty, dated January 28, 2022, except as such plans may be changed to conform to Village Codes and Ordinances.

2. Uses shall be governed by the B-5 Highway Business District use lists in the Village of Palatine Zoning Ordinance. In addition, the following uses shall also be permitted uses: Building and material sales; Cartage or express establishments; Contractor's shops and/or distributors; Warehousing and

Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)

distribution centers; Light assembly; and related office uses. Any use of the property shall also be subject to the required performance standards in the Village's Manufacturing District. Any signage shall comply with the regulations in the Village's Manufacturing District.

3. As a component of the Final Planned Development, a Planned Development letter of credit shall be submitted in a manner acceptable to the Director of Planning and Zoning and Village Engineer.

4. The final engineering plans shall be revised in a manner acceptable to the Village Engineer.

5. The final landscape plans shall be subject to the review and approval of the Director of Planning and Zoning and shall include additional shrub plantings along the Rand Road frontage, adjacent to the parking lot.

6. The final photometric and lighting plan shall be revised in a manner acceptable to the Village Engineer. Light shields shall be required for any lights proximate to residential properties, at the determination of the Village Engineer. This may include a 25-foot mounting height for exterior lights, in order to reduce the glare, at the direction of the Village Engineer.

7. The final traffic directional signage plan shall be submitted in a manner acceptable to the Village Engineer.

8. Cross access easements, declarations, and a Reciprocal Easement Agreement for the entire property governing the maintenance of access points, stormwater areas and any other common areas shall be submitted in a manner acceptable to the Village Attorney and Village Engineer. This could include a cross access easement for the property directly north of the Subject Property, if that property were to redevelop in the future, and if requested by the Village of Palatine.

9. The final dumpster locations and required screening shall be submitted in compliance with Village Code. The screening shall be constructed of durable materials similar to those of the building and shall have solid (opaque) walls and doors. The final locations could also require the submission of a revised auto-turn, in a manner acceptable to the Fire Marshal.

10. As a condition of the Final Planned Development, and pursuant to the project narrative, the Petitioner shall submit the proposed business and operations' plans (identified tenants) for Staff review for compliance with the B-5 use lists and standards, in addition to the additional uses identified in Condition #2.



Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)

11. If, at the determination of the Village, the proposed tenant composition (percentage of office/retail uses) increases or the Village of Palatine determines that there is a significant parking demand deficiency, based upon the required parking needs, the trailer parking directly east of the detention basin shall be converted to auto parking stalls, or a portion thereof, as noted on Ware Malcomb Concept Site Plan ("Scheme 9"), depicting up to 30 additional parking spaces.

**SECTION 2:** That a copy of the public notice, be attached hereto and form a part of this ordinance.

**SECTION 3:** This ordinance shall be in full force and effect upon passage and approval as provided by law.

PASSED: This 11 day of July, 2022

AYES: 6 NAYS: 0 ABSENT: 0 PASS: 0

APPROVED by me this 11 day of July, 2022

Mayor of the Village of Palatine

ATTESTED and FILED in the office of the Village Clerk

this 11 day of July, 2022

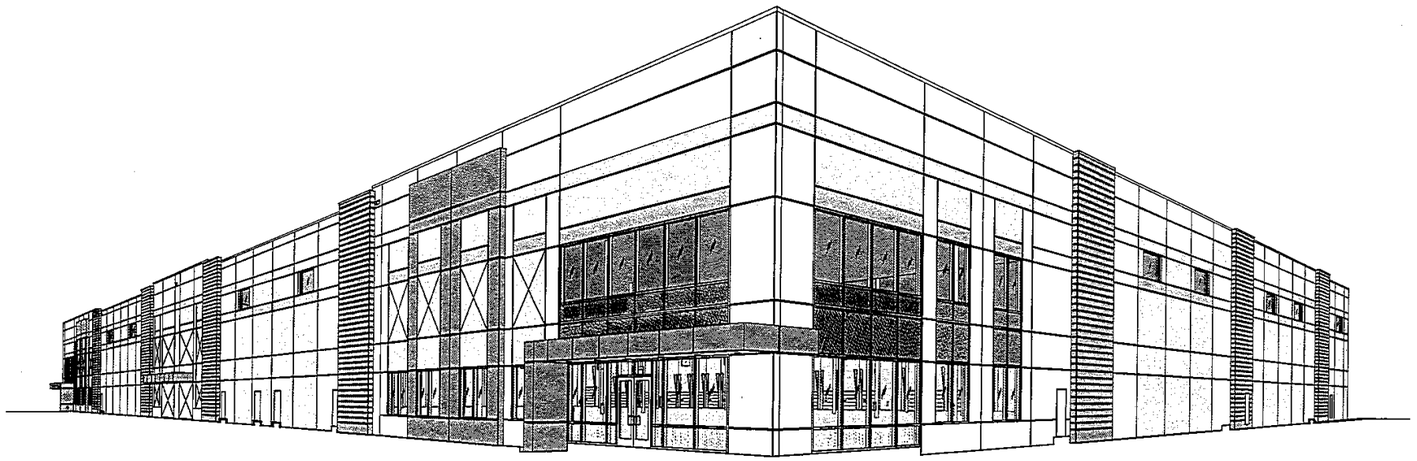
Village Clerk

Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)

CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCE

# MISSNER GROUP - PALATINE

## 2250 NORTH RAND ROAD
## PALATINE, ILLINOIS 60074



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TOTAL SHEETS: 33

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| A0.3 | ACCESSIBILITY DETAILS |
| A0.3a | ACCESSIBILITY DETAILS |
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| A0.4b | SPECIFICATIONS |
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| A0.4e | SPECIFICATIONS |
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ARCHITECTURAL SHEET COUNT: 33

### STRUCTURAL


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|---|---|
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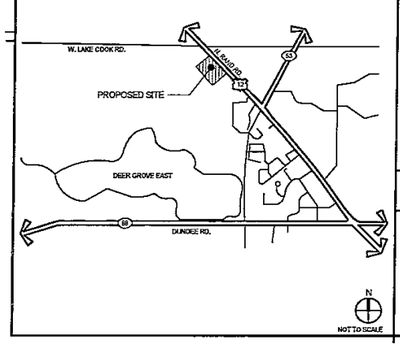
| S7.0 | INTERIOR BUILDING ELEVATION AND JOIST DIAGRAMS |


STRUCTURAL SHEET COUNT: 10

## VICINITY MAP




## OWNER/ GENERAL CONTRACTOR

THE MISSNER GROUP
THE MISSNER GROUP, LLC
1700 W. HIGGINS RD.
DES PLAINES, ILLINOIS 60018
PRIMARY CONTACT: BARRY MISSNER
PH: (847) 675-8477
EMAIL: bmissner@missnergroup.com

## OWNER'S CONSULTANTS

CIVIL & LANDSCAPE ARCHITECT
SPACECO, INC.
9575W. HIGGINS ROAD, SUITE 700
ROSEMONT, ILLINOIS 60018
PRIMARY CONTACT: BRIAN RATAJCZAK
PH: (847) 696-4060
EMAIL: brat@spaceocorp.com

## ARCHITECT'S CONSULTANTS

STRUCTURAL ENGINEER
IMEG.
225 W. WASHINGTON STREET, SUITE 2700
CHICAGO, ILLINOIS 60606
PRIMARY CONTACT: SCOTT A. WIERCINSKI
PH: (630) 200-3060
EMAIL: scott.a.wiercinski@imegcorp.com

## ARCHITECT

WARE MALCOMB
1335 22ND ST 60418
OAK BROOK, IL 60523
P 630.218.6063
A.O.R: GRANT BRANDENBURG NCARB
PH: (630) 574-8765
EMAIL: gbrandenburg@waremalcomb.com
PRIMARY CONTACT: MAREK PUIA
PH: (630) 906-4947 EXT. 1014
EMAIL: mpula@waremalcomb.com
ALTERNATE CONTACT: KALINA GEORGIEVA
PH: (630) 574-8787 EXT. 1024
EMAIL: kgeorgieva@waremalcomb.com

## DEFERRED SUBMITTALS

DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE ARCHITECT AND ENGINEERS OF RECORD WHO SHALL REVIEW AND PROVIDE NOTATION INDICATING DOCUMENTS HAVE BEEN REVIEWED AND FOUND TO BE IN GENERAL CONFORMANCE WITH THE BUILDING DESIGN. SUBMITTAL MATERIALS SHALL INCLUDE PLANS, DETAILS AND CALCULATIONS PREPARED AND SIGNED BY A STATE REGISTERED ENGINEER. CONTRACTOR SHALL SUBMIT ARCHITECT AND ENGINEER REVIEWED SUBMITTAL MATERIALS TO THE BUILDING OFFICIAL FOR REVIEW AND PERMIT APPROVAL. DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED PRIOR TO OBTAINING THE BUILDING OFFICIAL'S APPROVAL OF THE SUBMITTAL.

1. MEP SYSTEMS
2. AUTOMATIC FIRE SPRINKLER SYSTEM.
3. FIRE ALARM SYSTEM.
4. STEEL JOISTS, TRUSSES AND GIRDERS CONFORMING TO SJI STANDARDS SPECIFICATIONS.
5. STEEL STAIRS, HANDRAILS AND GUARDS.
6. HIGH PILED STORAGE RACKING.
7. EXTERIOR BUILDING SIGNAGE AND SITE SIGNAGE.
8. ANCHORAGE DESIGN FOR ALL ELECTRICAL EQUIPMENT REQUIRED.
9. STOREFRONT AND CURTAIN WALL GLAZING SYSTEMS.
10. ROOF HATCH, RAILING AND GATE.
11. ROOF ACCESS LADDER/PLATFORM DESIGN AND SUPPORT.
12. LADDER SAFETY SYSTEM DESIGN AND SUPPORT.


WARE MALCOMB
1335 22nd St. #410
Oak Brook, IL 60523
ARCHITECTURE CIVIL ENGINEERING PLANNING
Bids of Stock Design Firm Registration No. 184.004509


GRANT A. BRANDENBURG
EXP: 11 - 30 - 2022

THE MISSNER GROUP

MISSNER GROUP - PALATINE
2250 NORTH RAND ROAD

TITLE SHEET

| DATE | DESCRIPTION |
|---|---|
| 2021.12.14 | PROGRESS/PACKAGE |
| 2022.04.04 | PERMIT SET |

| | |
|---|---|
| PM/PIC: | M. PULA |
| DRAWN BY.: | S.R. |
| JOB NO.: | CH21-01934 |

SHEET
A0.1

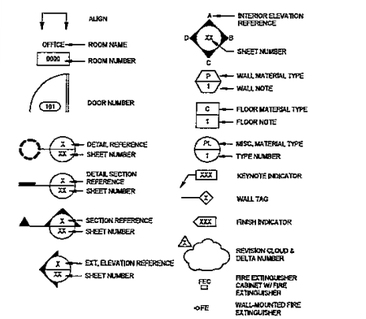
Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)

CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCE

## ABBREVIATIONS

| | | | | | |
|---|---|---|---|---|---|
| ∠ | ANGLE | | | | |
| ℄ | CENTERLINE | G.B. | GRAB BAR | R. | RISER |
| # | POUND or NUMBER | G.C. | GENERAL CONTRACTOR | R.B. | RUBBER / RESILIENT BASE |
| & | AND | G.F.I. | GROUND FAULT INTERRUPT | R.C.P. | REFLECTED CEILING PLAN |
| (E) | EXISTING | GA. | GAUGE | R.D. | ROOF DRAIN |
| @ | AT | GALV. | GALVANIZED | R.O. | ROUGH OPENING |
| ~ | DIAMETER or ROUND | GL. | GLASS | R.O.W. | RIGHT OF WAY |
| ø | DIAMETER | GND. | GROUND | R.T.U. | ROOF TOP UNIT |
| | | GR. | GRADE | R.W.L. | RAIN WATER LEADER |
| A.D. | AREA DRAIN | GYP. | GYPSUM | RAD. | RADIUS |
| ACOUS. | ACOUSTICAL | | | REF. | REFERENCE |
| ADJ. | ADJUST, ADJUSTABLE or ADJACENT | H.B. | HOSE BIBB | REFR. | REFRIGERATOR |
| | | H.C. | HOLLOW CORE | REINF. | REINFORCE(D) |
| AGGR. | AGGREGATE | H.M. | HOLLOW METAL | REQ. | REQUIRED |
| AL. | ALUMINUM | H.P. | HIGH POINT | RESIL. | RESILIENT |
| APPROX. | APPROXIMATE(LY) | H.V. | HIGH VOLTAGE | REGTR. | REGISTER |
| ARCH. | ARCHITECTURAL | HDWD. | HARDWOOD | RM. | ROOM |
| ASB. | ASBESTOS | HDWE. | HARDWARE | RWD. | REDWOOD |
| ASPH. | ASPHALT | HORIZ. | HORIZONTAL | | |
| | | HR. | HOUR | S. | SOUTH |
| B.O.C. | BOTTOM OF CONCRETE | HT. | HEIGHT | S.A.F. | SELF-ADHERED FLASHING |
| B.O.M. | BOTTOM OF MULLION | | | S.C. | SOLID CORE |
| B.O.P. | BOTTOM OF PANEL | I.D. | INSIDE DIMENSION | S.C.D. | SEAT COVER DISPENSER |
| B.O.R. | BOTTOM OF REVEAL | I.M.P. | INTERMEDIATE HIGH POINT | S.D. | SOAP DISPENSER |
| BD. | BOARD | INSUL. | INSULATION or INSULATED | S.F. | SQUARE FOOT |
| BITUM. | BITUMINOUS | INT. | INTERIOR | S.I. | SQUARE INCH |
| BLDG. | BUILDING | | | S.N.D. | SANITARY NAPKIN DISPENSER |
| BLK. | BLOCK | J.B. | JUNCTION BOX | | |
| BLKG. | BLOCKING | JAN. | JANITOR | S.N.R. | SANITARY NAPKIN RECEPTACLE |
| BM. | BEAM | JST. | JOIST | | |
| BOT. | BOTTOM | JT. | JOINT | S.S. | STAINLESS STEEL |
| | | | | S.SK. | SERVICE SINK |
| C.B. | CATCH BASIN | K.O. | KNOCK-OUT | S.T.C. | SOUND TRANSMISSION COEFFICIENT |
| C.G. | CORNER GUARD | K.P. | KICK PLATE | | |
| C.I. | CAST IRON | K.W.H. | KILOWATT HOUR | SCHED. | SCHEDULE |
| C.O. | CASED OPENING | KIT. | KITCHEN | SCWD. | SOLID CORE WOOD |
| C.O.M. | CENTER OF MULLION | | | SECT. | SECTION |
| C.O.R. | CENTER OF REVEAL | L.P. | LOW POINT | SH. | SHELF |
| CAB. | CABINET | L.S. | LIMESTONE | SHR. | SHOWER |
| CEM. | CEMENT(ITIOUS) | L.V. | LOW VOLTAGE | SHT. | SHEET |
| CER. | CERAMIC | L.W.C. | LIGHT WEIGHT CONCRETE | SIM. | SIMILAR |
| CLG. | CEILING | LAB. | LABORATORY | SPEC. | SPECIFIED or SPECIFICATION |
| CLKG. | CAULKING | LAM. | LAMINATE(D) | | |
| CLO. | CLOSET | LAV. | LAVATORY | SQ. | SQUARE |
| CLR. | CLEAR | LIN. | LINEAR | STA. | STATION |
| CNTR. | COUNTER | LIQ. | LIQUID | STD. | STANDARD |
| COL. | COLUMN | LKR. | LOCKER | STL. | STEEL |
| CONC. | CONCRETE | LT. | LIGHT | STOR. | STORAGE |
| CONN. | CONNECTION | LTL. | LINTEL | STRC. | STRUCTURE or STRUCTURAL |
| CONSTR. | CONSTRUCTION | LVR. | LOUVER | SUPP. | SUPPLEMENT or SUPPLEMENTARY |
| CONT. | CONTINUOUS | | | | |
| CORR. | CORRIDOR | M.B. | MOP BASIN | SUSP. | SUSPENDED |
| CTR. | CENTER | M.C. | MEDICINE CABINET | SYMM. | SYMMETRICAL |
| CTSK. | COUNTER-SUNK | M.O. | MASONRY OPENING | | |
| | | MAINT. | MAINTENANCE | T&G | TONGUE AND GROOVE |
| D.F. | DRINKING FOUNTAIN | MAN. | MANUAL | T. | TREAD |
| D.O. | DOOR OPENING | MAS. | MASONRY | T.B. | TOWEL BAR |
| D.S. | DOWNSPOUT | MAX. | MAXIMUM | T.C. | TOP OF CURB |
| D.S.P. | DRY STANDPIPE | MECH. | MECHANICAL | T.D. | TRENCH DRAIN |
| DBL. | DOUBLE | MEMBR. | MEMBRANE | T.O.C. | TOP OF CONCRETE |
| DEPT. | DEPARTMENT | MET. | METAL | T.O.M. | TOP OF MULLION |
| DET. | DETAIL | MEZZ. | MEZZANINE | T.O.P. | TOP OF PARAPET |
| DIA. | DIAMETER | MFR. | MANUFACTURER | T.O.R. | TOP OF REVEAL |
| DIM. | DIMENSION | MH. | MANHOLE | T.O.S.E.C. | TOP OF SLEEP RECESS |
| DISP. | DISPENSER | MIN. | MINIMUM | T.O.S. | TOP OF STEEL |
| DN. | DOWN | MIR. | MIRROR | T.O.W. | TOP OF WALL |
| DR. | DOOR | MISC. | MISCELLANEOUS | T.P. | TOP OF PAVEMENT |
| DWG. | DRAWING | MTD. | MOUNTED | T.P.D. | TOILET PAPER DISPENSER |
| DWR. | DRAWER | MUL. | MULLION | TEL. | TELEVISION |
| | | | | TEL. | TELEPHONE |
| E. | EAST | N. | NORTH | TER. | TERRAZZO |
| E.J. | EXPANSION JOINT | N.I.C. | NOT IN CONTRACT | THK. | THICK |
| E.P. | ELECTRIC PANELBOARD | N.R.C. | NOISE REDUCTION COEFFICIENT | TOL. | TOLERANCE |
| E.W.C. | ELECTRIC WATER COOLER | | | TYP. | TYPICAL |
| EA. | EACH | N.T.S. | NOT TO SCALE | | |
| EL. | ELEVATION | NO. | NUMBER | U.C. | UNDERCUT |
| ELEC. | ELECTRIC(AL) | NOM. | NOMINAL | U.H. | UNIT HEATER |
| ELEV. | ELEVATOR | | | U.L. | UNDERWRITERS' LABORATORIES |
| EMER. | EMERGENCY | O.A. | OVERALL | | |
| ENCL. | ENCLOSED or ENCLOSURE | O.C. | ON CENTER | U.O.N. | UNLESS OTHERWISE NOTED |
| EQ. | EQUAL | O.D. | OUTSIDE DIAMETER | UNF. | UNFINISHED |
| EQPT. | EQUIPMENT | O.F. | OUTSIDE FACE | URL. | URINAL |
| EXP. | EXPANSION | O.H. | OVERHEAD or OPPOSITE HAND | | |
| EXPO. | EXPOSED | | | V.C.T. | VINYL COMPOSITE TILE |
| EXIST. | EXISTING | OBS. | OBSCURE | V.I.F. | VERIFY IN FIELD |
| EXT. | EXTERIOR | OFF. | OFFICE | V.P. | VISION PANEL |
| | | OPNG. | OPENING | V.R. | VAPOR RETARDER |
| F.A. | FIRE ALARM | OPP. | OPPOSITE | VAC. | VACUUM |
| F.A.R. | FLOOR AREA RATIO | | | VERT. | VERTICAL |
| F.B. | FLAT BAR | P.C. | PRECAST | VEST. | VESTIBULE |
| F.D. | FLOOR DRAIN | P.J. | PANEL JOINT | VIT. | VITREOUS |
| F.E. | FIRE EXTINGUISHER | P.LAM. | PLASTIC LAMINATE | | |
| F.E.C. | FIRE EXTINGUISHER CABINET | P.S.F. | POUNDS PER SQUARE FOOT | W. | WEST |
| F.H.C. | FIRE HOSE CABINET | P.T.D. | PAPER TOWEL DISPENSER | W.C. | WATER CLOSET |
| F.O.C. | FACE OF CONCRETE | P.T.R. | PAPER TOWER RECEPTACLE | W.I. | WROUGHT IRON |
| F.O.F. | FACE OF FINISH | | | W.P. | WORKING POINT |
| F.O.M. | FACE OF MULLION | PL. | PLATE | W.S. | WEATHER STOP or STRIPPING |
| F.O.SH. | FACE OF SHEATHING | PLAS. | PLASTER | | |
| F.P. | FIREPROOF | PLYWD. | PLYWOOD | W.W.F. | WELDED WIRE FABRIC |
| F.S. | FULL SIZE | POL. | POLISHED) | W/ | WITH |
| FDN. | FOUNDATION | PR. | PAIR | W/O | WITHOUT |
| FIN. | FINISH(ED) | PT. | POINT | WD. | WOOD |
| FL. | FLOOR | | | WPM | WATERPROOFING MEMBRANE |
| FLASH. | FLASHING | Q.T. | QUARRY TILE | WRB | WEATHER/WATER RESISTIVE BARRIER |
| FLUOR. | FLUORESCENT | QUAL. | QUALITY | | |
| FT. | FOOT or FEET | QUAN. | QUANTITY | WSCT. | WAINSCOT |
| FTG. | FOOTING | | | WT. | WEIGHT |
| FURR. | FURRING | | | | |
| FUT. | FUTURE | | | | |

## SYMBOLS




## PROJECT DATA

**APPLICABLE CODES**

| | |
|---|---|
| CITY OF: | VILLAGE OF PALATINE, ILLINOIS |
| BUILDING: | 2015 INTERNATIONAL BUILDING CODE W/VILLAGE AMENDMENTS |
| STRUCTURE: | 2015 INTERNATIONAL BUILDING CODE W/VILLAGE AMENDMENTS |
| MECHANICAL: | 2015 INTERNATIONAL MECHANICAL CODE |
| ELECTRICAL: | 2017 NATIONAL ELECTRIC CODE |
| PLUMBING: | 2014 ILLINOIS PLUMBING CODE |
| ENERGY: | 2018 INTERNATIONAL ENERGY CONSERVATION CODE W/ILLINOIS AMENDMENTS |
| FIRE / LIFE SAFETY: | 2015 INTERNATIONAL FIRE CODE W/ VILLAGE AMENDMENTS<br>2000 LIFE SAFETY CODE, NFPA 101 |
| ACCESSIBILITY: | 2018 STATE OF ILLINOIS ACCESSIBILITY CODE |

CHAPTER 3 - USE & OCCUPANCY CLASSIFICATION

| OCCUPANCY | SECTION | USE | PROPOSED AREA (SF) |
|---|---|---|---|
| S-1 / STORAGE | [311] | WAREHOUSE | SEE ALLOWABLE AREA BELOW |

CHAPTER 5 - GENERAL BUILDING HEIGHTS AND AREAS

ALLOWABLE BUILDING HEIGHT:

| MAIN OCCUPANCY | SPRINKLER COVERTION | TABLE 504.3 ALLOWABLE BUILDING HEIGHT | TABLE 504.4 ALLOWABLE NUMBER OF FLOORS ABOVE GRADE PLANE | PROPOSED BUILDING HEIGHT IN FEET | PROPOSED NUMBER OF FLOORS ABOVE GRADE PLANE |
|---|---|---|---|---|---|
| S-1 | S | 75'-0" | 3 STORY | 42'-0" | 1 STORY |

ALLOWABLE BUILDING AREA:

| | |
|---|---|
| UNLIMITED AREA ALLOWED PER: | 507.4 & 507.2.4 |
| W/ AUTOMATIC SPRINKLER AND OPEN YARDS GREATER THAN 60 FEET ON ALL SIDES & 60 FEET W/ 3HR RATING | |

PROPOSED TOTAL BUILDING AREA: 145,488 S.F.

CHAPTER 6 - TYPES OF CONSTRUCTION

TYPE OF CONSTRUCTION (602): TYPE: II-B

| BUILDING ELEMENTS | (TABLE 601) | |
|---|---|---|
| STRUCTURAL FRAME: | 0 | HR. |
| EXTERIOR BEARING WALLS: | 0 | HR. |
| INTERIOR BEARING WALLS: | 0 | HR. |
| EXTERIOR NON-BEARING WALLS: | SEE BELOW | |
| INTERIOR NON-BEARING WALLS: | 0 | HR. |
| FLOORS: | 0 | HR. |
| ROOF: | 0 | HR. |

EXTERIOR WALLS BASED ON FIRE SEPARATION: (TABLE 602)

| | | |
|---|---|---|
| NORTH EXTERIOR WALL ( ≥ 30' ): | 0 | HR. |
| EAST EXTERIOR WALL ( ≥ 30' ): | 0 | HR. |
| SOUTH EXTERIOR WALL ( ≥ 30' ): | 0 | HR. |
| WEST EXTERIOR WALL ( ≥ 30' ): | 0 | HR. |

CHAPTER 7 - FIRE AND SMOKE PROTECTION FEATURES

ALLOWABLE AREA OF OPENINGS (TABLE 705.8) (FULLY SPRINKLERED THROUGHOUT)

| EXTERIOR WALLS | | FIRE SEPARATION DISTANCE | ALLOWABLE AREA (%) | EXTERIOR WALL PROTECTION | ACTUAL AREA OF OPENINGS PROVIDED (OPENINGS ARE PROTECTED) | ACTUAL AREA OF OPENINGS ALLOWED (IF UNPROTECTED) | ALLOWED AREA PER FACE (IF UNPROTECTED) |
|---|---|---|---|---|---|---|---|
| FLOOR 1 | NORTH | ≥ 30 | UNLIMITED UNPROTECTED OPENINGS ARE PERMITTED | | | | [AREA]+[AREA] |
| | EAST | | | | | | |
| | SOUTH | | | | | | |
| | WEST | | | | | | |

CHAPTER 9 - FIRE PROTECTION SYSTEMS

(903.3.1.1) AUTOMATIC SPRINKLER SYSTEM WILL BE PROVIDED AND INSTALLED WITH ACCORDANCE WITH NFPA 13.

(903.4) AUTOMATIC SPRINKLER SYSTEM MONITORING AND ALARMS WILL BE PROVIDED.

E.S.F.R. EARLY SUPPRESSION FAST-RESPONSE) AUTOMATIC FIRE PREVENTION SPRINKLER SYSTEM PROVIDED THROUGHOUT. SPRINKLER DESIGN AND CALCULATIONS TO BE SUBMITTED UNDER SEPARATE PERMIT.

(910.2) EXCEPTION 2: SMOKE AND HEAT VENTS NOT REQUIRED WHERE E.S.F.R. SPRINKLER SYSTEM IS PROVIDED

CHAPTER 10 - MEANS OF EGRESS (SEE OCCUPANCY AND EGRESS PLANS)

## PROJECT DESCRIPTION

THE SCOPE OF THIS PROJECT IS A 145,488 SF SHELL WAREHOUSE SPACE. THE BUILDING CONSTRUCTION SHALL CONSIST OF INSULATED PRECAST CONCRETE PANELS, TRENCH FOOTINGS AT THE PERIMETER, SLAB ON GRADE, AND STEEL STRUCTURAL COLUMNS AND ROOF COMPONENTS.

Bids at Brick Design Firm Registration No. 184.006499
WARE MALCOMB
ARCHITECTURE CIVIL ENGINEERING PLANNING
1515 Zarco Dr. #210
Glendale, IL 60139

GRANT A. SHANDERUBRUH
001-020642
REGISTERED ARCHITECT
EXP: 11 - 30 - 2022

THE MISSNER GROUP

MISSNER GROUP - PALATINE
2250 NORTH RAND ROAD

PROJECT DATA

| DATE | PROGRESS PACKAGE |
|---|---|
| 2021.11.01 | PERMIT SET |
| 2022.04.08 | |

| | |
|---|---|
| PAP/N: | M. PULA |
| DRAWN BY: | S.R. |
| JOB NO.: | CH21-0193-0 |

SHEET
A0.1a

Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)

CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCE

## ENVELOPE ASSEMBLY NOTES

1. **ROOF ASSEMBLY:**

1.1 **MAIN ROOF CONSTRUCTION:**
- 45 MIL BALLASTED EPDM USING ASTM 84 STONS AT 10 LBS/SF IN THE FIELD, 20 LBS/SF IN THE PERIMETER, AND 15 LBS/SF IN THE CORNERS W/FLASHING AT ALL ROOF OPENINGS (15 YEAR MANUFACTURER WARRANTY)
- (3) LAYERS OF ROOF INSULATION (R-30)
- METAL DECK (REFER TO STRUCT.); ROOF DECK WILL BE PAINTED WITH A BOTTOM SIDE FACTORY APPLIED "WHITE" PRIMER.
- GRAY TUBE STEEL COLUMNS AND GRAY JOISTS/GIRDERS. BUILDING COLUMNS ONE COLUMN FROM DOCK WALLS SHALL BE PAINTED TO A HEIGHT OF 15'-6" A/F/F IN SAFETY YELLOW.
- TWO LAYERS OF POLYISOCYANURATE INSULATION WITH STAGGERED SEAMS, TAPED AND SEALED.
- STAGGER JOINTS IN SUCCESSIVE LAYERS OF INSULATION A MINIMUM OF 18" APART
- THE ROOFING SYSTEM SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.

1.2 **COVERED CANOPY ROOF CONSTRUCTION:**
- FULLY ADHERED 41 MIL REINFORCED EPDM ROOF MEMBRANE, INSTALL PER ROOFING MANUFACTURER'S SPECIFICATIONS
- TAPERED RIGID INSULATION
- 1 1/2" METAL DECK (REFER TO STRUCT).
- STRUCTURAL MEMBERS (REFER TO STRUCTURAL DRAWINGS FOR LAYOUT AND MEMBER SIZES)

2. **EXTERIOR WALL ASSEMBLIES:**

2.1 **PRE-CAST CONCRETE WALL PANELS**
- LOAD BEARING INSULATED PRE-CAST CONCRETE WALL PANELS - 12.5" THICK WITH REVEALS AND PAINTED FINISH, TYP. TOTAL AVALUE OF PRECAST CONCRETE SANDWICH WALL ASSEMBLY PROVIDED SHALL BE NOT LESS THAN R-4, ALL PANELS' JOINTS WILL BE CAULKED ON BOTH THE INTERIOR AND EXTERIOR.
- STANDARD 14'-0" OR 12'-0" WIDE PANELS. PRE-CAST CONCRETE WALL PANELS SHALL RECEIVE A TINTED PRIMER COAT AND TWO (2) COATS OF TEXTURED PAINT.
- PAINT COLORS: (A) BASE COLOR: SW 7662 EVENING SHADOW; (B) SW 7694 PHINESTONE; (C) SW 6256 EVENING GRAY; (D) SW 6794 PLYAWAY.

2.2 **PRE-FINISH ALUMINUM METAL PANELS: CANOPY AND WALL DESIGN**
- METAL STUD FRAMING
- 1/2" PLYWOOD SHEATHING
- HIGH TEMPERATURE WEATHER RESISTANT BARRIER (WRB)
- PRE-FINISHED ALUMINUM METAL PANELS INSTALLED PER MANUFACTURER'S RECOMMENDATIONS

3. **EXTERIOR GLAZING ASSEMBLIES:**

3.1 **STOREFRONT/ WINDOW/ CLERESTORY GLAZING SYSTEM:**
- INSULATED GLAZING UNITS (THERMALLY BROKEN) HIGH PERFORMANCE GLASS
- STOREFRONT SYSTEM/WINDOWS & CLERESTORY WINDOWS: CENTER GLAZED (EQUAL) WITH MATCHING EXTERIOR - BASE OF DESIGN)
- 1/2" AIR SPACE
- 1/4" SOLARBAN 120, CLEAR LOW-E ON SURFACE 2) GLAZING UNIT
- CLEAR ANODIZED ALUMINUM FRAMES WITH A THERMO-BREAK DESIGN

ALL GLASS USED IN THE ENVELOPE OF THE BUILDING TO BE:
- SOLARBAN R100 (BASE OF DESIGN) OR APPROVED EQUAL
- PERFORMANCE CRITERIA:
  1. VLT (VISIBLE LIGHT TRANS.): 32%
  2. EXTERIOR REFLECTANCE: 15%
  3. U FACTOR (WINTER): 0.28
  4. U FACTOR (SUMMER): 0.28
  5. SHADING COEFFICIENT: 0.27
  6. SHGC: 0.24
  7. RELATIVE HEAT GAIN: 59

GLASS WIND LOAD RESISTANCE CALCULATIONS ARE UNDER SEPARATE PERMIT

| | | |
|---|---|---|
| 3.2 | COLOR OF GLASS: (EXTERIOR GLAZING) | TINTED (COLOR TO BE SELECTED BY TENANT) |
| 3.3 | COLOR OF GLASS: (INTERIOR GLAZING) | CLEAR |
| 3.4 | SPANDREL GLASS: (IF ANY) | COLOR TO MATCH CLEAR ANODIZED STOREFRONT SYSTEM MULLIONS |
| 3.4 | CLERESTORY WINDOWS: | FRAMING SHALL BE CLEAR ANODIZED ALUMINUM WITH TINTED GLASS (COLOR: GRAY) |

4. **EXTERIOR SWINGING DOOR ASSEMBLIES:**

4.1 **SERVICE/ MAN DOORS:**
- 16GA GALVANIZED HOLLOW METAL FLUSH DOORS AND 16GA FULLY WELDED H.M. GALVANIZED DOOR FRAMES
- PAINTED, INSULATED HOLLOW METAL DOOR w/COMMERCIAL GRADE HEAVY DUTY THUMB LATCH LOCKING SCHLAGE MORTISE LOCKS, FALCON SEST DEVICES AND LCN CLOSERS
- DOORS AND FRAMES ARE TO HAVE SHOP PRIMED PAINT APPLIED.
- COLOR: REFER TO BUILDING ELEVATIONS. COLOR TO MATCH COLOR OF ADJACENT EXTERIOR WALL
- UL RATED DOORS AS REQUIRED BY CODE (ALL DOORS REQUIRED BY CODE TO BE FIRE RATED SHALL HAVE LABELS DESIGNATING HOURLY RATINGS PER UNDERWRITER'S LABORATORY STANDARDS)

4.2 **STOREFRONT SYSTEM DOORS;**
- MEDIUM STILE ENTRY DOORS WITH 1" INSULATED W/ 1/4" GLAZING ASSEMBLY, CLOSERS, WEATHER-STRIPPING AND THRESHOLDS
- CLEAR ANODIZED ALUMINUM STOREFRONT DOOR w/ TEMPERED GLAZING

5. **EXTERIOR NON-SWINGING DOOR ASSEMBLIES:**

5.1 **SECTIONAL DOORS:**
- MANUALLY OPERATED SECTIONAL VERTICAL LIFT OVERHEAD DOCK DOORS WITH 2-QUARD TRACK PROTECTION
- STEEL SECTIONAL DOORS, INSULATED, MINIMUM (AVALUE OF 0.270 (R-4)
- ALL DOORS SHALL BE PROVIDED WITH ONE (1) VISION PANEL.
- Z CHANNEL TRACK GUARDS TO BE INCLUDED FOR ALL OVERHEAD DOORS
- ALL DOORS TO HAVE SLIDE BOLT MECHANISMS AND HAVE A WHITE POLYESTER FINISH.
- OVERHEAD DOORS SHALL BE EQUIPPED WITH WEATHER STRIPPING. GALVANIZED FLUSH STEEL FACE, METAL TRACK AND HARDWARE

5.2 **DRIVE-IN DOORS:**
- MOTOR (ELECTRIC) OPERATED SECTIONAL VERTICAL LIFT OVERHEAD D.I.D. DOORS
- STEEL SECTIONAL DOORS, INSULATED, MINIMUM (AVALUE OF 0.270 (R-4)
- ALL DOORS SHALL BE PROVIDED WITH ONE (1) VISION PANEL (1" INSULATED GLASS)
- Z CHANNEL TRACK GUARDS TO BE INCLUDED FOR ALL OVERHEAD DOORS
- ALL DOORS TO HAVE SLIDE BOLT MECHANISMS AND HAVE A WHITE POLYESTER FINISH.
- OVERHEAD DOORS SHALL BE EQUIPPED WITH WEATHER STRIPPING. VISION PANEL. GALVANIZED FLUSH STEEL FACE, METAL TRACK AND HARDWARE

6. **PERIMETER INSULATION:**
PROVIDE CONTINUOUS RIGID INSULATION AT PERIMETER OF FIRST STORY BUILDING SLAB. MINIMUM (AVALUE R=10, PROVIDE INSULATION TO A DEPTH OF 24" BELOW GRADE-LINE AT BUILDING FACE.

7. **FLOOR ASSEMBLY:**

7.1 **SLAB-ON-GRADE:**
- REFER TO STRUCTURAL FOR FLOOR ASSEMBLY
- 10 MIL VAPOR BARRIER INCLUDED AT FUTURE OFFICE AREAS
- WAREHOUSE FLOORS SHALL BE SEALED WITH 1 COAT OF ASHFORD SEALER OR EQUAL.

## DOOR NOTES

1. VERIFY THAT ALL DOORS AND DOOR HARDWARE MEET THE REQUIREMENTS OF ALL GOVERNING CODES & STANDARDS, NOTIFY THE ARCHITECT IMMEDIATELY IN CASE OF DISCREPANCY.
2. FIELD MEASURE AS REQUIRED ALL DOORS AND/OR DOOR OPENINGS PRIOR TO FABRICATION.
3. PROVIDE SIGN IN CONTRASTING LETTERS OF 1 INCH OR MORE AT MAIN ENTRY STATING "THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED" UNLESS LOCK UNLATCHES WITHOUT A KEY OR NEED OF SPECIAL KNOWLEDGE.
4. VERIFY THAT EXISTING DOORS (IF ANY) COMPLY WITH ACCESSIBILITY REQUIREMENTS.
5. FIRE RATED AND SMOKE AND DRAFT CONTROL DOORS SHALL COMPLY WITH REQUIREMENTS OF ALL GOVERNING CODES & STANDARDS AND SHALL BEAR A LABEL FROM A RECOGNIZED AGENCY SHOWING THE SPECIFIC RATINGS.
6. ALL SWINGING DOOR HANDLES TO BE LEVER-TYPE TO COMPLY WITH GOVERNING CODES & ACCESSIBILITY STANDARDS.
7. DOOR HANDLES OR PULLS AND ALL OTHER OPERABLE PARTS OF DOOR HARDWARE (SUCH AS DEADBOLTS, KEYHOLES,...ETC.) ARE TO BE CENTERED BETWEEN 34" AND 44" ABOVE FINISH FLOOR, IF EXISTING BUILDING STANDARD EXISTS, MATCH BUILDING STANDARD AND CONFIRM COMPLIANCE WITH ACCESSIBILITY REQUIREMENTS.
8. SPECIAL LOCKING DEVICES SHALL BE OF AN APPROVED TYPE BY AUTHORITY HAVING JURISDICTION.
9. PROVIDE WEATHER SEALS ON ALL EXTERIOR DOORS TO RESTRICT INFILTRATION PER ANSI / ECC STANDARDS.
10. CONTRACTOR IS RESPONSIBLE TO COORDINATE & VERIFY ALL DOOR FRAME THROAT THICKNESSES FOR EACH LOCATION
11. ALL DOOR FRAMES TO BE FACTORY FINISHED, U.O.N.
12. PROVIDE 6"x16 GA MIN FLAT METAL OR 2x6 BACKING (FIT AS REQUIRED) BEHIND ALL WALL MOUNTED DOOR STOPS. FLOOR MOUNTED DOOR STOP SHALL NOT BE PLACED IN A PATH OF EGRESS AS A TRIPPING HAZARD.
13. MAXIMUM UNDERCUT OF ALL NON-FIRE RATED DOORS SHALL NOT EXCEED 1/2" ABOVE FINISH FLOOR SURFACE.
14. CONTRACTOR SHALL REFINISH ANY ELEMISHED DOOR OR REPLACE SAID DOOR IF NOT ABLE TO REFINISH TO "AS NEW" CONDITION.
15. ALL DOORS TO BE OPERABLE FROM THE INSIDE WITHOUT A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT.
16. ALL DOORS WITH ELECTRONIC SECURITY DOOR LOCKS MUST BE OPERABLE FOR EXITING PURPOSES UNDER ALL CONDITIONS, INCLUDING A POWER OUTAGE.
17. IF BUILDING STANDARDS ARE INCONSISTENT FOR DOORS, SIDELITES, HARDWARE, DOOR AND SIDELITE FRAMES OR OTHER STANDARD DETAILS, THEN CONTRACTOR MUST VERIFY WITH ARCHITECT AND OWNER PRIOR TO CONSTRUCTION.
18. WINDOWS AND DOORS SHALL MEET THE MAXIMUM AIR LEAKAGE REQUIREMENTS AS INDICATED IN ECC TABLE C402.5.2 (QC TO COORDINATE)
19. EXTERIOR WINDOWS AND DOORS SHALL BE LABELED AS CONFORMING TO AAMA/NWDA 101/I.S.2/NAFS, LABEL TO STATE NAME OF MANUFACTURER, THE APPROVED LABELING AND THE PRODUCT DESIGNATION.

## ROOF NOTES

1. SEE MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR SCHEMATIC LAYOUT OF ROOF LEVEL HVAC, PLUMBING AND ELECTRICAL EQUIPMENT, PIPE, CONDUIT PLATFORMS, HOUSEKEEPING PADS, BASES, SHAFT OPENINGS, DECK PENETRATIONS, ETC.
2. CONTRACTOR SHALL VERIFY SIZE, LOCATIONS, AND INSTALLATIONS REQUIREMENTS OF ALL HVAC, PLUMBING AND ELECTRICAL EQUIPMENT WITH EQUIPMENT MANUFACTURERS AND SUBMIT A FINAL LAYOUT OF ALL EQUIPMENT FOR ARCHITECT APPROVAL.
3. THE TOP OF MECHANICAL AND PLUMBING EQUIPMENT PLATFORMS AND CURBS SHALL MEASURE A MINIMUM OF 8" ABOVE THE HIGHEST ADJACENT TOP OF ROOFING ELEVATION.
4. VENT OPENINGS THROUGH THE ROOF SHALL BE INSTALLED 10'-0" MINIMUM AWAY FROM AND TERMINATED 3'-0" MINIMUM ABOVE ANY FRESH AIR INTAKE.
5. SEE PLUMBING DRAWINGS FOR ROOF DRAIN AND SECONDARY DRAIN SIZES.
6. CRICKETS SHALL BE INSTALLED ON THE HIGH SIDE OF ANY OBSTRUCTION MORE THAN 47" WIDE AND ORIENTED PERPENDICULAR TO THE FLOW OF WATER TO THE DRAIN. SUCH OBSTRUCTIONS INCLUDE BUT ARE NOT LIMITED TO EQUIPMENT PADS, CURBS AND WALLS.
7. ROOFING ASSEMBLIES SHALL BE SELECTED AND INSTALLED AS REQUIRED TO RESIST MAXIMUM WIND SPEEDS AND UPLIFT FORCES DICTATED BY CODE AND LOCAL OR STATE LAW AS APPLIED TO THE ROOF'S GEOGRAPHIC LOCATION, HEIGHT AND EXPOSURE CLASS.
8. OVERFLOW SCUPPERS AND SECONDARY ROOF DRAINS SHALL BE DESIGNED PER APPLICABLE CODES WITH INLETS LOCATED 3" ABOVE THE LOW POINT OF THE SURROUNDING FINISHED ROOF SURFACE. COORDINATE W/ STRUCTURAL.
9. ORIENT SKYLIGHT/SMOKE HATCH (IF ANY) HINGE SIDE TOWARD THE PREVAILING WIND.
10. ALL ROOF SURFACES SHALL SLOPE A MINIMUM OF 1/4 INCH PER FOOT IN ALL DIRECTIONS.
11. SEE STRUCTURAL DRAWINGS FOR ROOF FRAMING.
12. ALL ROOF SURFACES SHALL STOP AT A MINIMUM OF 18 INCH PER FOOT IN ALL DIRECTIONS. CRICKETS SHALL BE USED ON THE HIGH SIDE OF ALL EQUIPMENT PLATFORMS.
13. REFER TO STRUCTURAL DRAWINGS ROOF ELEVATIONS (BOTTOM OF DECK) FROM FINISHED FLOOR, DATUM ELEVATION 0'-0".
14. T.O.P = TOP OF PARAPET / PANEL.
15. ROOFING MATERIALS AND ASSEMBLY SHALL BE RATED UL CLASS "A" FIRE RETARDANT
16. PROVIDE MULTI-COMPONENT EXPANDING POLYURETHANE FOAM SEALANT AT BUILDING PERIMETER & ROOF PENETRATIONS (TYP.)

## IL. ENERGY CONSERV. CODE

THE INTERNATIONAL ENERGY CONSERVATION CODE (IECC) HAS BEEN ADOPTED BY THE STATE OF ILLINOIS PER THE JOINT COMMITTEE ON ADMINISTRATIVE RULES CODE: TITLE 71: CHAPTER I: SUBCHAPTER d: PART 600.110 "ADOPTION AND MODIFICATION OF IECC CODE", SUBSECTION 3 "PRIVATELY FUNDED COMMERCIAL FACILITIES AND RESIDENTIAL BUILDINGS"

IN ACCORDANCE WITH IECC SECTION C401.2, 1, "APPLICATION", THE ENVELOPE OF THE SUBJECT PROJECT SHALL COMPLY WITH THE REQUIREMENTS OF ANSI/ASHRAE / IESNA 90.1. THE COMPLIANCE PATH SHALL BE VIA APPLICATION OF THE ANSI/ASHRAE / IESNA 90.1 SECTION 5.2.1.b, "SUBSECTION 5.6, BUILDING ENVELOPE TRADE-OFF OPTION."

COMPLIANCE SHALL BE DEMONSTRATED BY SUBMITTAL OF "COMPLIANCE CERTIFICATES" GENERATED FOR THE SUBJECT PROJECT BY THE U.S. DEPARTMENT OF ENERGY'S COMCHECK CODE COMPLIANCE TOOL. IN ACCORDANCE WITH THE STATE OF ILLINOIS JOINT COMMITTEE ON ADMINISTRATIVE RULES ADMINISTRATIVE CODE: TITLE 71: CHAPTER I: SUBCHAPTER D: PART 600:

SECTION 600.330, "COMPLIANCE", SUBSECTION b) 2)

## FIRE AUTHORITY NOTES

1. FINAL INSPECTION BY FIRE DEPARTMENTS REQUIRED - SCHEDULE 2 DAYS IN ADVANCE. THE LOCAL AUTHORITY HAVING JURISTDICTION IS REQUIRED FOR FINAL INSPECTIONS.
2. THE PROJECT ADDRESS SHALL BE PROVIDED FOR ALL NEW AND EXISTING BUILDINGS IN A POSITION AS TO BE PLAINLY VISIBLE AND LEGIBLE FROM THE STREET OR ROAD FRONTING THE PROPERTY PER LOCAL FIRE DEPARTMENT STANDARDS.
3. AN UNOBSTRUCTED ALL-WEATHER FIRE APPARATUS ACCESS ROAD SHALL BE IN PLACE PRIOR TO DELIVERY OF COMBUSTIBLE BUILDING MATERIALS TO THE SITE.
4. FIRE PREVENTION WATER SERVICE SHALL BE IN SERVICE PRIOR TO THE DELIVERY OF COMBUSTIBLE BUILDING MATERIALS TO THE SITE.
5. ACCESS GATES (IF ANY) SHALL BE APPROVED PRIOR TO INSTALLATION AND SHALL BE IN COMPLIANCE WITH LOCAL FIRE AUTHORITY.
6. PRIVATE FIRE HYDRANTS, SPRINKLER CONTROL AND POST INDICATOR VALVES...AND RISERS TO FIRE DEPARTMENT CONNECTIONS SHALL BE PAINTED "SAFETY RED" PER LOCAL FIRE AUTHORITY.
7. ALL FIRE HYDRANTS SHALL HAVE A "BLUE REFLECTIVE PAVEMENT MARKER" INDICATING ITS LOCATION ON THE STREET OR DRIVE PER LOCAL FIRE AUTHORITY STANDARDS, ON PRIVATE PROPERTY THESE MARKERS ARE TO BE MAINTAINED IN GOOD CONDITION BY THE PROPERTY OWNER, (REFER TO CIVIL)
8. PROVIDE OUTSIDE GAS SHUT-OFF VALVE. PROVIDE SIGN INDICATION MAIN GAS AND ELECTRICAL SHUT-OFF LOCAL FIRE DEPARTMENT.
9. FIRE SPRINKLER SYSTEM(S) SHALL MEET STATE & LOCAL FIRE CODES AND BE PROVIDED TO PROTECT ENTIRE BUILDING INCLUDING PROJECTIONS OVER 4'-0".
10. FIRE SPRINKLER SYSTEMS AND ALL CONTROL VALVES, INCLUDING EXTERIOR THAN RE-ALL ARE TO BE SUPERVISED BY A U.L. LISTED CENTRAL ALARM STATION OR PER STATE & LOCAL FIRE CODES.
11. ALL VALVES CONTROLLING THE WATER SUPPLY FOR AUTOMATIC SPRINKLER SYSTEMS AND WATER-FLOW SWITCHES ON ALL SPRINKLER SYSTEMS SHALL BE ELECTRONICALLY SUPERVISED.
12. WHERE THE NUMBER OF SPRINKLERS IS 199 OR MORE, ELECTRICAL SUBCONTRACTOR'S TO INSTALL WIRING FOR FIRE SPRINKLER, ALARM BELL AND TELEPHONE WARNING AS REQUIRED BY FIRE DEPARTMENT.
13. INSTALLATION OF FIRE ALARM SYSTEMS SHALL BE IN ACCORDANCE WITH STATE & LOCAL FIRE CODES.
14. COMPLETE PLANS AND SPECIFICATIONS FOR ALL FIXED FIRE PROTECTION EQUIPMENTS INCLUDING AUTOMATIC SPRINKLERS AND OTHER FIRE-PRO TECTION SYSTEMS, SHALL BE SUBMITTED BY INSTALLING CONTRACTOR. SUCH PLANS SHALL BE APPROVED BY LOCAL FIRE AUTHORITY PRIOR TO INSTALLATION.
15. ALL RECESSED FIRE DOORS SHALL BEAR A LABEL FROM A RECOGNIZED AGENCY SHOWING THE SPECIFIC RATINGS.
16. EXIT SIGNS AND ILLUMINATION SHALL CONFORM TO ALL APPLICABLE BUILDING AND FIRE CODES.
17. EXIT DOORS SHALL BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT.
18. PROVIDE OR MODIFY AS NEEDED SPRINKLER ALARM AND SMOKE DETECTION SYSTEM PER APPLICABLE CODES INCLUDING IF NECESSARY FLOW SENSING, STROBE LIGHTS, CONTROL PANEL CONNECTIONS, SMOKE DETECTORS, AUDIO VISUAL ALARMS. SUBMIT SHOP DRAWINGS TO THE FIRE MARSHAL FOR APPROVAL.
19. AT LEAST ONE (1) FIRE EXTINGUISHER WITH A MINIMUM RATING OF: 3-A :10B:C (FOR OFFICE), OR 10-A:80:C (FOR WAREHOUSE), SHALL BE PROVIDED WITH IN 75'-0" MAXIMUM TRAVEL DISTANCE FOR EACH 3,000 SQUARE FEET OR PORTION THEREOF ON EACH FLOOR.
20. LOCATIONS AND CLASSIFICATIONS OF FIRE EXTINGUISHERS SHALL BE IN ACCORDANCE WITH STATE & LOCAL FIRE CODES AND PLACEMENTS SUBJECT TO THE APPROVAL OF THE FIRE INSPECTOR. VERIFY QUANTITY & EXACT LOCATION FROM FIRE DEPARTMENT PRIOR TO ORDERING.
21. STORAGE, DISPENSING OR USE OF ANY FLAMMABLE AND COMBUSTIBLE LIQUIDS, FLAMMABLE AND COMPRESSED GASES, AND OTHER HAZARDOUS MATERIAL SHALL COMPLY WITH STATE & LOCAL FIRE CODES. THE STORAGE AND USE OF HAZARDOUS MATERIALS SHALL BE APPROVED BY THE FIRE AUTHORITY PRIOR TO ANY MATERIALS BEING STORED OR USED ON SITE. A SEPARATE PLAN SUBMITTAL IS REQUIRED FOR THE STORAGE AND USE OF HAZARDOUS MATERIALS.
22. BUILDING(S) NOT APPROVED FRO HIGH-PILED STOCK (MATERIALS IN CLOSELY PACKED PILES OR ON PALLETS, OR IN RACKS WHERE THE TOP OF STORAGE EXCEDS 12'-0" IN HEIGHT, AND 6'-0" FOR GROUP "A" PLASTICS AND CERTAIN OTHER HIGH-HAZARD COMMODITIES). HIGH-PILED STOCKS SHALL BE APPROVED BY THE FIRE AUTHORITY PRIOR TO MATERIALS BEING STORED ON SITE. A SEPARATE PLAN SUBMITTAL IS REQUIRED FOR HIGH-PILED STORAGE IN ACCORDANCE WITH STATE & LOCAL FIRE CODES.
23. A LETTER OF INTENDED USE MAY BE REQUIRED BY THE FIRE INSPECTOR.

## SITE NOTES

1. REFER TO LANDSCAPE DRAWINGS FOR CONCRETE WALKS, PAVING, BERMS, LANDSCAPING AND IRRIGATION.
2. REFER TO CIVIL DRAWINGS FOR SITE GRADING, DRAINAGE, CATCH BASINS, PAVING DETAILS, SITE UTILITIES, CURB AND GUTTER GRADES, FIRE HYDRANT LOCATIONS AND HORIZONTAL CONTROL DIMENSIONS.
3. REFER TO CIVIL DRAWINGS FOR POINT OF CONNECTIONS TO OFF-SITE UTILITIES. CONTRACTOR TO VERIFY ACTUAL UTILITY LOCATIONS.
4. ALL DIMENSION ON SITE PLAN ARE TO BE FACE OF CONCRETE WALL, FACE OF CONCRETE CURB, PROPERTY LINE OR CENTERLINE OF PARKING STALL, UNLESS OTHERWISE NOTED.
5. FIRE HYDRANTS SHALL BE INSTALLED IN ACCORDANCE WITH THE LOCAL FIRE DEPARTMENT STANDARDS.
6. ALL PARKING STALL STRIPING SHALL BE PER LOCAL JURISDICTION STANDARDS.
7. CONCRETE WALK SHALL RECEIVE EXPANSION JOINTS AT 50'-0" O.C MAX, AND CONTROL JOINTS AT 5'-0" O.C MAX, BETWEEN EXPANSION JOINTS, UNLESS NOTED OTHERWISE.

## FLOOR PLAN NOTES

1. ALL EXITS SHALL HAVE EXIT SIGNS.
2. REFER TO PLUMBING, CIVIL AND SITE PLANS, FOR SIZE AND ROUTING OF ROOF DRAINAGE CONNECTION TO UNDERGROUND STORM DRAIN OR RUN TO DAYLIGHT AS SHOWN.
3. FLOORS SHALL BE SLOPED TO FLOOR DRAINS. COORDINATE WITH PLUMBING AND STRUCTURAL DRAWINGS. IN RATED FLOOR CONDITIONS, CONFIRM REMAINING FLOOR THICKNESS STILL CONFORMS TO MINIMUM RATING REQUIREMENT

## GLAZING NOTES

1. EACH LIGHT SHALL BEAR THE MANUFACTURER'S LABEL DESIGNATING THE TYPE AND THICKNESS OF THE GLASS.
2. GLASS SHALL BE FIRMLY SUPPORTED ON ALL FOUR EDGES, U.O.N.
3. FIELD MEASURE ALL OPENINGS PRIOR TO FABRICATION.
4. FILED OR OPERABLE GLAZING IN HAZARDOUS LOCATIONS AS DEFINED IN THE BUILDING CODE SHALL BE TEMPERED GLASS (SAFETY GLASS).
5. GLAZING IN SWINGING, SLIDING AND BIFOLD DOORS SHALL BE TEMPERED.
6. ALL GLAZING WITHIN A 24" ARC OF EITHER EDGE OF A DOOR AND WITHIN 60" OF THE FLOOR SHALL BE TEMPERED.
7. GLAZING IN WINDOWS: ALL GLAZING THAT MEETS ALL OF THE FOLLOWING CONDITIONS SHALL BE TEMPERED:
   A. THE EXPOSED AREA OF AN INDIVIDUAL PANE IS GREATER THAN 9 SF.
   B. THE BOTTOM EDGE IS LESS THAN 18" ABOVE THE FLOOR.
   C. THE TOP EDGE IS GREATER THAN 36" ABOVE THE FLOOR.
   D. WALKING SURFACE IS WITHIN 36".
8. ALL GLASS SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE AND LOCAL CODES AND THE U.S. PRODUCT SAFETY COMMISSIONS' SAFETY STANDARDS FOR ARCHITECTURAL GLAZING MATERIALS.
9. WHERE JOINTS ARE REQUIRED IN MULTIPLE LITES, CLEAR SILICONE IS TO BE PROVIDED, U.O.N.
10. WINDOWS AND DOORS SHALL MEET THE MAXIMUM AIR LEAKAGE REQUIREMENTS AS INDICATED IN IECC TABLE C402.5.2 (QC TO COORDINATE)
11. EXTERIOR WINDOWS AND DOOR SHALL BE LABELED AS CONFORMING TO AAMA/NWDA 101/I.S.2 OR 101/I.S.2/NAFS, LABEL TO STATE NAME OF MANUFACTURER, THE APPROVED LABELING AGENCY AND THE PRODUCT DESIGNATION.

SUBPART B

MINIMUM LATERAL LOAD RESISTANCE (PSF) OF GLAZING

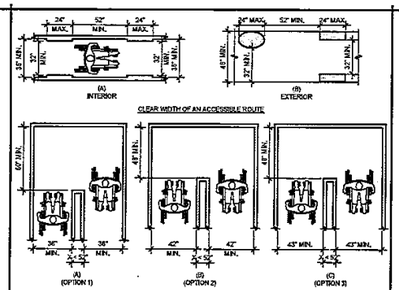
| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 |

## GENERAL PROJECT NOTES

### GENERAL NOTES

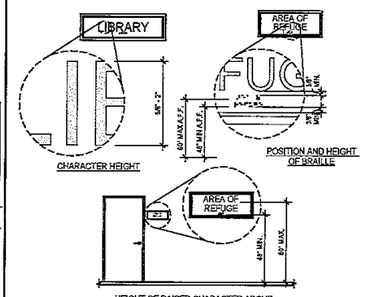
1. ALL WORK SHALL BE PERFORMED SO AS TO COMPLY WITH ALL LEGAL, INDUSTRY AND PROJECT-SPECIFIC REQUIREMENTS AND STANDARDS INCLUDING WITHOUT LIMITATION OF THE FOLLOWING.
   A. ALL APPLICABLE BUILDING CODES
   B. ALL APPLICABLE SPECIALTY CODES INCLUDING THE MOST CURRENT ISSUES AND SUPPLEMENTS
   C. THE PROJECT MANUAL AND ASSOCIATED SPECIFICATIONS WHEN PROVIDED
   D. THE MANUFACTURER'S REQUIREMENTS OR RECOMMENDATIONS
   E. ALL APPLICABLE LANDLORD BUILDING STANDARDS
2. IN USING THESE PLANS FOR BIDDING OR CONSTRUCTION PURPOSES, ALL CONTRACTORS ARE REQUIRED TO REVIEW AND TREAT THEM AS A WHOLE IN ORDER TO IDENTIFY ALL REQUIREMENTS THAT DIRECTLY OR INDIRECTLY AFFECT THEIR PORTION OF THE WORK, EVEN REQUIREMENTS LOCATED IN SECTIONS DESIGNATED AS APPLICABLE TO OTHER TRADES OR IN DOCUMENTS PROVIDED BY OTHER MEMBERS OF THE PROJECT DESIGN TEAM. UNLESS EXPRESSLY PROVIDED OTHERWISE, THE INTENT IS TO INCLUDE ALL LABOR, MATERIALS, PRODUCTS AND SERVICES NECESSARY OR APPROPRIATE FOR THE COMPLETED PROJECT AS CALLED FOR OR REASONABLY IMPLIED FROM THE PLANS AND SPECIFICATIONS PROVIDED BY THE PROJECT'S DESIGN TEAM. IN CASE OF CONFLICTS OR OMISSIONS, THE AFFECTED CONTRACTOR IS REQUIRED TO EITHER OBTAIN DIRECTION FROM AN APPROPRIATE REPRESENTATIVE OF THE OWNER, OR OTHERWISE TO APPLY THE MORE STRINGENT OR COSTLY STANDARD.
3. IN INTERPRETING THESE PLANS, THE FOLLOWING GENERAL RULES APPLY:
   A. WRITTEN DIMENSIONS SHALL GOVERN; DO NOT SCALE THE DRAWINGS. LARGE SCALE DRAWINGS AND DETAILS TAKE PRECEDENCE OVER SMALLER SCALE DRAWINGS.
   B. SPECIFIC NOTES AND DETAILS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS
   C. WHERE CONSTRUCTION DETAILS ARE NOT SHOWN OR NOTED FOR ANY PART OF THE WORK, THE DETAILS SHALL BE THE SAME AS FOR OTHER SIMILAR WORK IN THE SAME BUILDING.
   D. WORK SHOWN AS "NIC" IS FOR REFERENCE ONLY AND THE RESPONSIBILITY OF THE CONTRACTOR ONLY TO THE EXTENT THAT THIS WORK MAY REQUIRE SOME REASONABLE PROTECTION OR COORDINATION EFFORTS.
4. THESE PLANS AND SPECIFICATIONS ARE INTENDED TO REPRESENT ONLY THE FINISHED CONSTRUCTION. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL CONSTRUCTION AND DEMOLITION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES INCLUDING ANY AND ALL SAFETY PRECAUTIONS AND PROGRAMS, AND SHALL INDEMNIFY TO THE FULLEST EXTENT ALLOWED BY LAW THE OWNER AND THE PROJECT DESIGN TEAM FROM AND AGAINST ANY AND ALL RELATED CLAIMS AND LIABILITY.
5. THESE PLANS AND SPECIFICATIONS ARE INTENDED TO SET FORTH THE REQUIREMENTS FOR CONSTRUCTION IN ONLY A MODERATE STANDARD LEVEL OF QUALITY AND DETAIL, AND THEY ARE INTENDED TO BE SUPPLEMENTED BY APPROPRIATE REQUESTS FOR INFORMATION (RFIs), ERRATA AND ADDENDA ARE TO BE EXPECTED AND ANTICIPATED, AND ALL CONTRACTORS ARE REQUIRED TO CAREFULLY REVIEW THESE PLANS FOR ERRORS AND OMISSIONS AND TO BRING THESE ERRORS AND OMISSIONS TO THE ATTENTION OF AN APPROPRIATE OWNER REPRESENTATIVE IN A TIMELY MANNER; AND ANY CONTRACTOR WHO FAILS TO DO SO BEFORE BIDDING OR OTHERWISE PROCEEDING ASSUMES THE RISK OF ANY CONSEQUENCES.
6. DIMENSIONS SCALED FROM DRAWINGS SHALL BE CONSIDERED APPROXIMATE. CONTRACTORS THAT FAIL TO FIELD MEASURE AND VERIFY OBSTACLES, CLEARANCE AND FIT ARE PROCEEDING AT THEIR OWN RISK.
7. EXCEPT WHERE DIMENSIONED, PLANS ARE TO BE CONSIDERED DIAGRAMMATIC IN NATURE AND INTENDED ONLY TO DEMONSTRATE THE RELATIONSHIP AMONG COMPONENT PARTS, AND NOT TO DEPICT SPECIFIC LOCATIONS.
8. DESIGN/BUILD CONTRACTOR SUBMITTALS WILL BE REVIEWED BY THE PROJECT DESIGN TEAM, IF AT ALL, ONLY FOR CONFORMANCE WITH THE ASSOCIATED ASPECTS AND MAJOR SPACE LIMITATIONS OF THE PROJECT; AND EACH DESIGN/BUILD CONTRACTOR IS RESPONSIBLE FOR THE FOLLOWING:
   A. PREPARING ALL THE ENGINEERING AND OTHER DRAWINGS AND SPECIFICATIONS FOR THE COMPONENTS OF ITS DESIGN/BUILD UNDERTAKING.
   B. COMPLYING WITH THE PROJECT'S REQUIREMENTS AND SPACE LIMITATIONS.
   C. COORDINATING WITH OTHER SUBCONTRACTORS, OTHER TRADES AND CONSULTANTS.
   D. OBTAINING ANY REQUIRED OR APPROPRIATE APPROVALS FROM AUTHORITIES HAVING JURISDICTION OVER THE PROJECT.
   E. HAVING THEIR DESIGN CONSULTANTS SERVE AS THE PROFESSIONAL OF RECORD FOR THE PORTIONS OF WORK WHICH THEY DESIGN.
9. AS MAY BE REQUIRED BY THE AUTHORITIES HAVING JURISDICTION, AT THE CONCLUSION OF CONSTRUCTION EACH FINAL SUBCONTRACTOR SHALL PROVIDE WRITTEN CERTIFICATION THAT THEIR PORTION OF THE WORK HAS BEEN PERFORMED IN COMPLIANCE WITH THE BUILDING PERMIT APPROVED PLANS AND SPECIFICATIONS.
10. VERSIONS OF THESE PLANS PROVIDED IN ANY ELECTRONIC FORM ARE SUBJECT TO THE SAME PROVISION AS THE OTHER INSTRUMENTS OF SERVICE PREPARED BY OR ON BEHALF OF THE PROJECT DESIGN TEAM, INCLUDING WITHOUT LIMITATION THEIR COPYRIGHT OR STATUTORY OR OTHER RESERVED RIGHTS, INCLUDING COPYRIGHTS. A RECIPIENT IS GRANTED AT MOST A TRANSFERABLE NONEXCLUSIVE LICENSE TO REUSE THE PLANS SOLELY FOR ITS OWN PROJECT PURPOSES; AND NO RECIPIENT IS AUTHORIZED TO USE OR TO ALLOW THE

CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCE



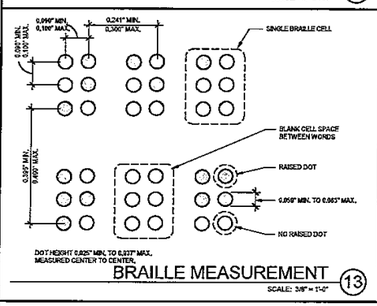

## CLEAR WIDTH (18)

SCALE: 1/4" = 1'-0"



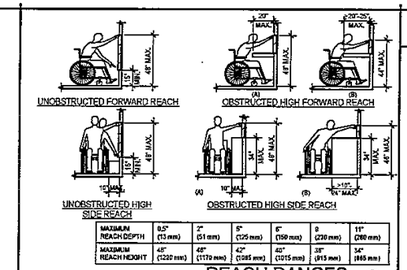

## SIGNS (12)

SCALE: 1/4" = 1'-0"




## BRAILLE MEASUREMENT (13)

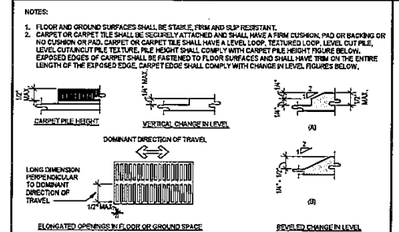
SCALE: 3/8" = 1'-0"




| MAXIMUM REACH DEPTH | 0.5" (13 mm) | 2" (51 mm) | 4" (105 mm) | 6" (150 mm) | 9 (230 mm) | 11" (280 mm) |
|---|---|---|---|---|---|---|
| MAXIMUM REACH HEIGHT | 48" (1220 mm) | 48" (1170 mm) | 42" (1065 mm) | 40" (1015 mm) | 36" (915 mm) | 34" (865 mm) |

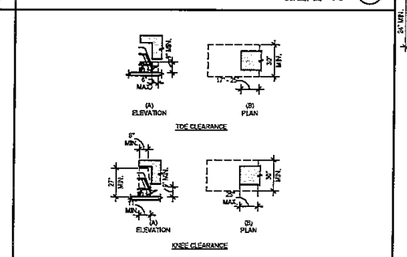
## REACH RANGES (6)

SCALE: 1/4" = 1'-0"



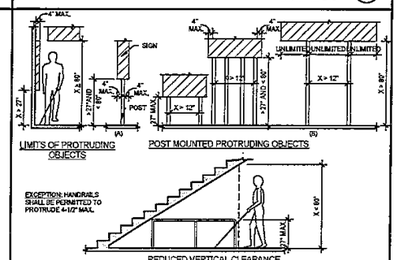

## FLOOR OR GROUND SURFACES & CHANGES IN LEVEL (7)

SCALE: 1/2" = 1'-0"




## KNEE AND TOE CLEARANCE (8)

SCALE: 1/4" = 1'-0"



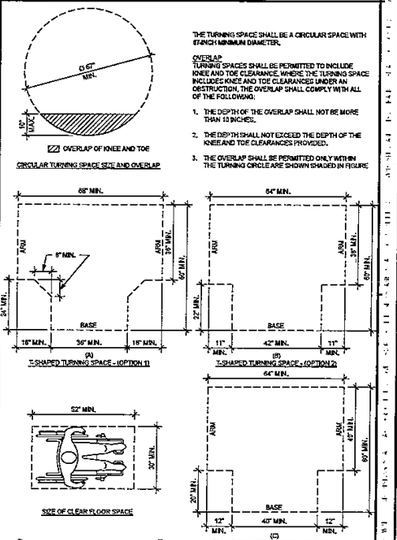

## PROTRUDING OBJECTS (9)

SCALE: 1/4" = 1'-0"

| PARKING SPACES PER 2010 ADA | |
|---|---|
| TOTAL NUMBER OF PARKING SPACES PROVIDED IN PARKING FACILITY | MINIMUM NUMBER OF REQUIRED ACCESSIBLE PARKING SPACES |
| 1 TO 25 | 1 |
| 26 TO 50 | 2 |
| 51 TO 75 | 3 |
| 76 TO 100 | 4 |
| 101 TO 150 | 5 |
| 151 TO 200 | 6 |
| 201 TO 300 | 7 |
| 301 TO 400 | 8 |
| 401 TO 500 | 9 |
| 501 TO 1000 | 2 PERCENT OF TOTAL |
| 1001 AND OVER | 20, PLUS 1 FOR EACH 100, OR FRACTION THEREOF, OVER 1000 |

## PARKING SPACES (10)

SCALE: 1/2" = 1'-0"



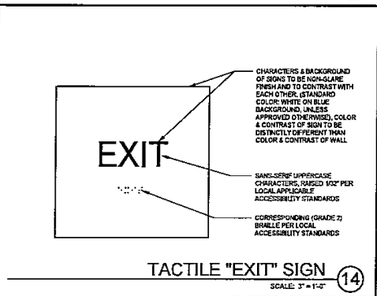

THE TURNING SPACE SHALL BE A CIRCULAR SPACE WITH 67-INCH MINIMUM DIAMETER.

OVERLAP
TURNING SPACES SHALL BE PERMITTED TO INCLUDE KNEE AND TOE CLEARANCE, WHERE THE TURNING SPACE INCLUDES KNEE AND TOE CLEARANCES UNDER AN OBSTRUCTION, THE OVERLAP SHALL COMPLY WITH ALL OF THE FOLLOWING:

1. THE DEPTH OF THE OVERLAP SHALL NOT BE MORE THAN 19 INCHES.
2. THE DEPTH SHALL NOT EXCEED THE DEPTH OF THE KNEE AND TOE CLEARANCES PROVIDED.
3. THE OVERLAP SHALL BE PERMITTED ONLY WITHIN THE TURNING CIRCLE ARE SHOWN SHADED IN FIGURE

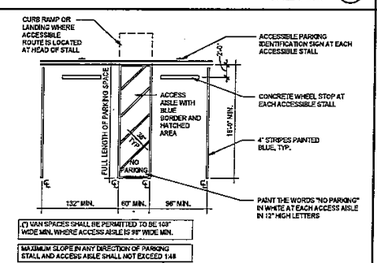
## CLEAR FLOOR OR GROUND SPACE (4)

SCALE: 1/2" = 1'-0"




## TACTILE "EXIT" SIGN (14)

SCALE: 3" = 1'-0"




## VEHICLE PARKING SPACES (15)

SCALE: 1/8" = 1'-0"

| HEIGHT TO FINISH FLOOR FROM BASELINE OF CHARACTER | HORIZONTAL VIEWING DISTANCE | MINIMUM CHARACTER HEIGHT |
|---|---|---|
| 40 INCHES TO LESS THAN OR EQUAL TO 70 INCHES | LESS THAN 72 INCHES | 5/8 INCH |
| | 72 INCHES AND GREATER | 5/8 INCH, PLUS 1/8 INCH PER FOOT OF VIEWING DISTANCE ABOVE 72 INCHES |
| GREATER THAN 70 INCHES TO LESS THAN OR EQUAL TO 120 INCHES | LESS THAN 180 INCHES | 2 INCHES |
| | 180 INCHES AND GREATER | 2 INCHES, PLUS 1/8 INCH PER FOOT OF VIEWING DISTANCE ABOVE 180 INCHES |
| GREATER THAN 120 INCHES | LESS THAN 21 FEET | 3 INCHES |
| | 21 FEET AND GREATER | 3 INCHES, PLUS 1/8 INCH PER FOOT OF VIEWING DISTANCE ABOVE 21 FEET |

1. THE VERTICAL HEIGHT IS MEASURED FROM THE FLOOR OF THE VIEWING POSITION TO THE BASELINE OF THE HIGHEST LINE OF CHARACTERS.

## VISUAL CHARACTER HEIGHT (5)

SCALE: 1/2" = 1'-0"

## ACCESSIBILITY NOTES

1. "THE ACCESSIBILITY GUIDELINES AND CODES" MENTIONED BELOW REFER TO ALL APPLICABLE LOCAL/STATE BUILDING CODES REFERENCED ON THE PROJECT DATA SHEET OF THIS SET IN ADDITION TO THE FEDERAL REQUIREMENTS OF THE ADA (THE AMERICANS WITH DISABILITIES ACT).
2. DETAILS ON THIS SHEET ARE FOR REFERENCE ONLY. REFER TO THE ACCESSIBILITY GUIDELINES AND CODES FOR ALL ACCESSIBILITY REQUIREMENTS.
3. THE GENERAL CONTRACTOR SHALL BECOME FAMILIAR WITH THE ACCESSIBILITY GUIDELINES AND CODES.
4. ANY DISCREPANCY CONTAINED HEREIN DOES NOT RELIEVE THE GENERAL CONTRACTOR OR OWNER FROM COMPLYING WITH THE ACCESSIBILITY GUIDELINES AND CODES.

Bids at Ware Malcomb Plan Registration No. 184-004099
WARE MALCOMB
ARCHITECTURE CIVIL ENGINEERING PLANNING
1515 South 4th #103 Oak Brook, IL 60523

GRANT A MARSHMANN 001-020642 EXP: 11 - 30 - 2022

THE MISSNER GROUP

ACCESSIBILITY DETAILS

| DATE | REMARKS |
|---|---|
| 2022-03-04 | PROGRESS PACKAGE |
| 2022-04-15 | PERMIT SET |

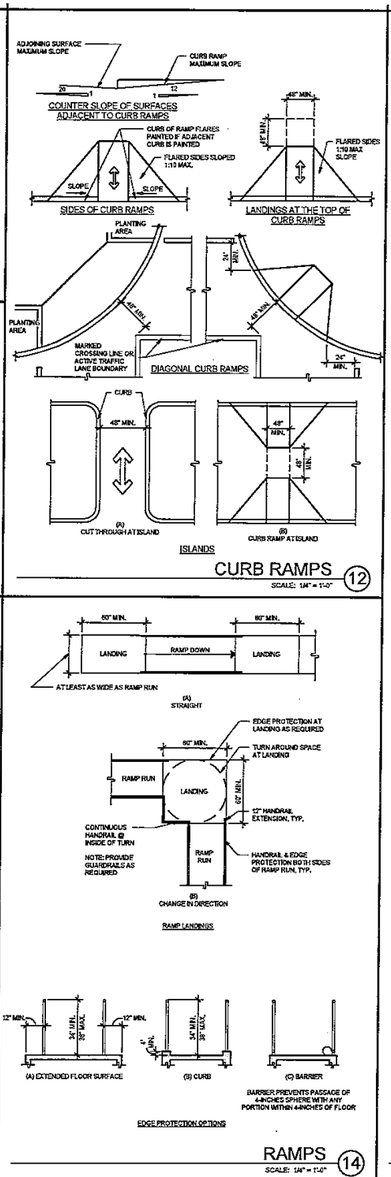
| | |
|---|---|
| PM/PR: | M. PULA |
| DRAWN BY: | S.R. |
| JOB NO.: | CH21-01353-0 |

SHEET A0.3

MISSNER GROUP - PALATINE
2250 NORTH RAND ROAD

Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)

CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCE



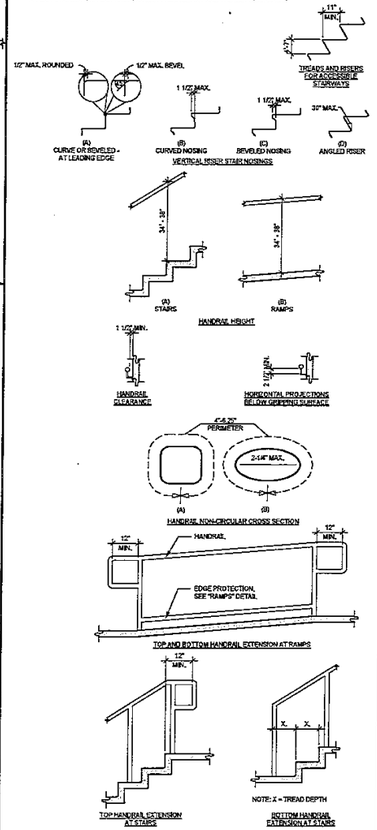

NOTES:
STAIRS
1. OPEN RISERS ARE NOT PERMITTED.
2. TREAD SURFACES SHALL COMPLY WITH (FLOOR OR GROUND SURFACES & CHANGES IN LEVEL) DETAIL, AND SHALL A SLOPE NOT STEEPER THAN 1:48.

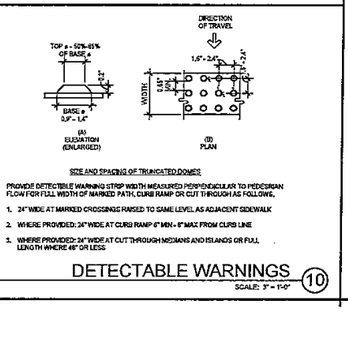
HANDRAILS
1. HANDRAIL GRIPPING SURFACES SHALL BE CONTINUOUS ALONG THEIR LENGTH AND SHALL NOT BE OBSTRUCTED ALONG THEIR TOPS OR SIDES. THE BOTTOM OF THE HANDRAIL GRIPPING SURFACES SHALL NOT BE OBSTRUCTED FOR MORE THAN 20 PERCENT OF THEIR LENGTH, WHERE PROVIDED, HORIZONTAL PROJECTIONS SHALL OCCUR 1-1/2" MINIMUM BELOW THE BOTTOM OF THE HANDRAIL GRIPPING SURFACE.
4. HANDRAIL GRIPPING SURFACES WITH CIRCULAR CROSS SECTIONS SHALL HAVE AN OUTSIDE DIAMETER OF 1-1/4" (32 MM) MINIMUM AND 2" MAXIMUM.
5. HANDRAIL GRIPPING SURFACES AND ANY SURFACES ADJACENT TO THEM SHALL BE FREE OF SHARP OR ABRASIVE ELEMENTS AND SHALL HAVE ROUNDED EDGES.
6. HANDRAILS SHALL NOT ROTATE WITHIN THEIR FITTINGS.

NOSINGS
7. NOSING WITHIN A STAIRWAY SHALL BE UNIFORM.
8. IF ROUNDED, THE RADIUS OF CURVATURE AT THE LEADING EDGE OF THE TREAD SHALL BE 1/2 INCH (13mm) MAXIMUM.
9. IF BEVELED, THE BEVEL AT THE LEADING EDGE SHALL SLOPE AT 45 DEGREES TO THE PLANE OF THE TOP SURFACE OF THE TREAD AND LANDING AND EXTEND FOR A HORIZONTAL DISTANCE OF 1/2 INCH (13 MM) MAXIMUM.
10. NOSINGS THAT PROJECT BEYOND RISERS SHALL HAVE THE UNDERSIDE OF THE LEADING EDGE CURVED OR BEVELED.
11. RISERS SHALL BE PERMITTED TO SLOPE UNDER THE TREAD AT AN ANGLE OF 30 DEGREES MAXIMUM FROM VERTICAL.
12. THE PERMITTED PROJECTION OF THE NOSING SHALL BE 1 1/2 INCHES (38 MM) MAXIMUM OVER THE TREAD OR FLOOR BELOW.

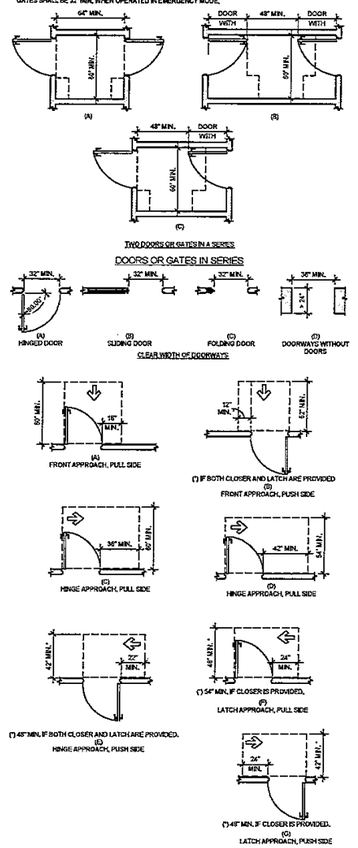
VISUAL CONTRAST
13. VISUAL CONTRAST SHALL COMPLY WITH EITHER 1 OR 2:
   1. THE LEADING 1 TO 2 INCHES (25 TO 51MM) OF EVERY TREAD AND LANDING, MEASURED HORIZONTALLY FROM THE LEADING EDGE OF THE NOSING, SHALL CONSIST OF A SOLID COLOR HAVING VISUAL CONTRAST OF DARK-ON-LIGHT OR LIGHT-ON-DARK FROM THE REMAINDER OF THE TREAD. THE CONTRASTING MARKING SHALL BE DURABLE AND SHALL EXTEND FROM ONE SIDE OF EACH TREAD TO THE OTHER SIDE OF EACH TREAD.
   2. DURABLE DISTINCTIVE WARNING MARKINGS REQUIRED BY THE ADOPTED BUILDING CODE OR ANSI SAFETY STANDARD.

TACTILE SIGNAGE AT EXITS
14. A SIGN STATING EXIT IN RAISED CHARACTERS AND BRAILLE SHALL BE PROVIDED ADJACENT TO EACH DOOR TO AND AREA OF REFUGE PROVIDING DIRECT ACCESS TO A STAIRWAY, AN EXTERIOR AREA FOR ASSISTED RESCUE, AN EXIT STAIRWAY, AN EXIT RAMP, AN EXIT PASSAGEWAY AND THE EXIT DISCHARGE.




NOTES:
1. FLOOR OR GROUND SURFACE WITHIN REQUIRED MANEUVERING CLEARANCES AND LANDINGS ON BOTH SIDES OF DOORS SHALL COMPLY WITH (FLOOR OR GROUND SURFACES & CHANGES IN LEVEL) DETAIL, AND SHALL HAVE A SLOPE NOT STEEPER THAN 1:48 IN ANY DIRECTION. VERTICAL CHANGES IN LEVEL ARE NOT PERMITTED.
2. THRESHOLDS, WHERE PROVIDED AT DOORWAYS, SHALL BE 1/2" MAX HIGH WITH A BEVELED PROFILE THAT COMPLIES WITH (FLOOR OR GROUND SURFACES & CHANGES IN LEVEL) DETAIL.
3. HANDLES, PULLS, LATCHES, LOCKS AND OTHER OPERABLE PARTS ON DOORS AND GATES SHALL HAVE A SHAPE THAT IS EASY TO GRASP WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST TO OPERATE.
4. HARDWARE OPERATION BY A FORWARD, PUSHING OR PULLING MOTION: 15 POUNDS (66.7N) MAXIMUM.
5. HARDWARE OPERATION BY A ROTATIONAL MOTION: 25 INCH-POUNDS (2.83N-M) MAXIMUM.
6. OPERABLE PARTS OF DOOR HARDWARE SHALL BE 34" MIN. AND 48" MAX. ABOVE THE FINISH FLOOR OR GROUND.
7. WHERE SLIDING DOORS ARE IN THE FULLY OPEN POSITION, OPERATING HARDWARE SHALL BE EXPOSED AND USABLE FROM BOTH SIDES.
8. DOOR AND GATE CLOSERS SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 90 DEGREES THE TIME REQUIRED TO MOVE THE DOOR TO A POSITION OF 12 DEGREES FROM THE LATCH IS 5 SECONDS MIN.
9. DOOR AND GATE SPRING HINGES SHALL BE ADJUSTED SO THAT FROM THE OPEN POSITION OF 70 DEGREES THE DOOR OR GATE SHALL MOVE TO THE CLOSED POSITION IN 1.5 SECONDS MIN.
10. THE FORCE REQUIRED TO PUSH OR PULL A DOOR OR GATE OPEN SHALL BE AS FOLLOWS:
   10.1 INTERIOR HINGED DOORS AND GATES: 5 LBS (22.5 N) MAX.
   10.2 SLIDING OR FOLDING DOORS: 5 LBS (22.5 N) MAX.
   EXCEPTION: THE FORCE REQUIRED TO RETRACT LATCH BOLTS OR DISENGAGE OTHER DEVICES THAT HOLD THE DOOR OR GATE IN A CLOSED POSITION SHALL NOT APPLY TO PANIC HARDWARE, DELAYED EGRESS DEVICES OR FIRE-RATED HARDWARE.
   10.3 REQUIRED FIRE DOORS: THE MINIMUM OPENING FORCE ALLOWABLE BY THE APPROPRIATE ADMINISTRATIVE AUTHORITY, NOT TO EXCEED 15 LBS (66.7N).
   10.4 EXTERIOR HINGED DOORS: 5 LBS (22.5 N) MAX.
11. SWINGING DOOR AND GATE SURFACES WITHIN 10" OF THE FINISH FLOOR OR GROUND MEASURED VERTICALLY SHALL HAVE A SMOOTH SURFACE ON THE PUSH SIDE EXTENDING THE FULL WIDTH OF THE DOOR OR GATE. PARTS CREATING HORIZONTAL OR VERTICAL JOINTS IN THESE SURFACE SHALL BE WITHIN 1/16" OF THE SAME PLANE AS THE OTHER AND BE FREE OF SHARP OR ABRASIVE EDGES. CAVITIES CREATED BY ADDED KICK PLATES SHALL BE CAPPED.
12. WHERE AUTOMATIC AND POWER-ASSISTED DOORS AND GATES WITHOUT STANDBY POWER ARE PART OF A MEANS OF EGRESS THE CLEAR WIDTH OF BREAK OUT OPENINGS AT SWINGING OR SLIDING DOORS AND GATES SHALL BE 32" MIN, WHEN OPERATED IN EMERGENCY MODE.




WARE MALCOMB
ARCHITECTURE PLANNING CIVIL ENGINEERING BRANDING
3315 Timber Ridge Drive, Ste 100
Oak Brook, IL 60523
State of Illinois Design Firm Registration No. 184.000699

GRANT A. BRANDENBURG
001-020646
EXP: 11 - 30 - 2022

THE MISSNER GROUP

MISSNER GROUP - PALATINE
2250 NORTH RAND ROAD

ACCESSIBILITY DETAILS

| DATE | REVISIONS |
|---|---|
| 2022.02.04 | PROGRESS PACKAGE |
| 2022.04.01 | PERMIT SET |

| | |
|---|---|
| PAPM: | M. PULA |
| DRAWN BY.: | S.R. |
| JOB NO.: | CH21-2163-00 |

SHEET
A0.3a

Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)

CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED

## 00 31 32 - GEOTECHNICAL DATA

1.1 INVESTIGATION

A. AN INVESTIGATION OF SUBSURFACE SOIL CONDITIONS AT THE BUILDING SITE WAS AUTHORIZED BY THE OWNER, A COPY IS ATTACHED AS AN APPENDIX TO THESE SPECIFICATIONS.
B. THE GEOTECHNICAL INVESTIGATION REPORT IS FOR INFORMATION ONLY, AND IS NOT A WARRANTY OF SUBSURFACE CONDITIONS.
C. THE REPORT IS MADE AVAILABLE FOR INFORMATION ONLY, AND IS NOT A CONTRACT DOCUMENT.
D. THE INFORMATION CONTAINED IN THE REPORT REPRESENTS DESIGN CRITERIA, RECOMMENDATIONS, AND GUIDELINES THAT WERE UTILIZED AS THE BASIS OF DESIGN FOR THE ENGINEERING OF THE EARTHWORK OPERATIONS, PAVING DESIGN, AND FOUNDATION DESIGN INDICATED IN THE CONTRACT DOCUMENTS, NO CHANGES IN THIS DESIGN CRITERIA WILL BE CONSIDERED OR PERMITTED.

1.2 RESPONSIBILITY

A. BIDDERS ARE EXPECTED TO EXAMINE THE SITE AND SUBSURFACE INVESTIGATION REPORTS AND THEN DECIDE FOR THEMSELVES THE CHARACTER OF THE MATERIALS TO BE ENCOUNTERED.
B. THE ARCHITECT AND OWNER ASSUMES NO RESPONSIBILITY FOR VARIATIONS IN SUBSOIL CONDITIONS, QUALITY, OR STABILITY, OR FOR THE PRESENCE, LEVEL, AND EXTENT OF UNDERGROUND WATER.
C. THE ARCHITECT AND OWNER ASSUME NO RESPONSIBILITY FOR BIDDER'S INTERPRETATION OF DATA CONTAINED IN THE REPORT.

## 00 73 00 - GENERAL CONDITIONS

1.1 GENERAL CONDITIONS

A. THE "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION", AIA DOCUMENT A201, SEVENTEENTH EDITION, 2007, ARTICLES 1 THROUGH 15 INCLUSIVE, IS A PART OF THIS CONTRACT, AND IS AVAILABLE FOR REVIEW FROM THE ARCHITECT. THE GENERAL CONDITIONS AND ALL MODIFICATIONS LISTED HEREINAFTER SHALL APPLY TO ALL VARIOUS SUBCONTRACTS AND SUB-SUBCONTRACTORS.
B. REFER TO DOCUMENT 009000 FOR SUPPLEMENTARY CONDITIONS.

## 01 31 00 - PROJECT MANAGEMENT AND COORDINATION

1.1 COORDINATION

A. COORDINATION: COORDINATE CONSTRUCTION OPERATIONS INCLUDED IN DIFFERENT SECTIONS OF THE SPECIFICATIONS AND ELSEWHERE IN THE CONTRACT DOCUMENTS THAT ARE INTERDEPENDENT, AND WORK, COORDINATE CONSTRUCTION OPERATIONS, INCLUDED IN DIFFERENT SECTIONS, THAT DEPEND ON EACH OTHER FOR PROPER INSTALLATION, CONNECTION, AND OPERATION.
   1. SCHEDULE CONSTRUCTION OPERATIONS IN SEQUENCE REQUIRED TO OBTAIN THE BEST RESULTS WHERE INSTALLATION OF ONE PART OF THE WORK DEPENDS ON INSTALLATION OF OTHER COMPONENTS, BEFORE OR AFTER ITS OWN INSTALLATION.
   2. COORDINATE INSTALLATION OF DIFFERENT COMPONENTS TO ENSURE MAXIMUM PERFORMANCE AND ACCESSIBILITY FOR REQUIRED MAINTENANCE, SERVICE, AND REPAIR.
   3. MAKE ADEQUATE PROVISIONS TO ACCOMMODATE ITEMS SCHEDULED FOR LATER INSTALLATION.

1.2 REQUESTS FOR INTERPRETATION (RFI)

A. GENERAL: IMMEDIATELY ON DISCOVERY OF THE NEED FOR INTERPRETATION, CLARIFICATION, OR ADDITIONAL INFORMATION OF THE CONTRACT DOCUMENTS, SHALL PREPARE AND SUBMIT AN RFI. SEND RFIS DIRECTLY TO ARCHITECT VIA EMAIL OR POSTED TO PROJECT COLLABORATION SITE (IF ONE IS BEING UTILIZED), OWNER WILL TRANSMIT RFIS PROMPTLY TO ARCHITECT.
   1. ARCHITECT WILL RETURN RFIS SUBMITTED BY OTHER ENTITIES CONTROLLED BY CONTRACTOR WITH NO RESPONSE.
   2. COORDINATE RFI AND SUBMIT RFIS IN A PROMPT MANNER SO AS TO AVOID DELAYS IN CONTRACTOR'S WORK OR WORK OF INSTALLERS (I.E., SPECIALTY CONTRACTORS OR SUBCONTRACTORS).

1.3 PROJECT MEETINGS

A. GENERAL: SCHEDULE AND CONDUCT MEETINGS AND CONFERENCES AT PROJECT SITE, UNLESS OTHERWISE INDICATED.
   1. ATTENDEES: INFORM PARTICIPANTS AND OTHERS INVOLVED, AND INDIVIDUALS WHOSE PRESENCE IS REQUIRED, OF DATE AND TIME OF EACH MEETING. NOTIFY OWNER AND ARCHITECT OF SCHEDULED MEETING DATES AND TIMES.
   2. AGENDA: PREPARE THE MEETING AGENDA. DISTRIBUTE THE AGENDA TO ALL INVITED ATTENDEES.
   3. MINUTES: ENTITY RESPONSIBLE FOR CONDUCTING MEETING WILL RECORD SIGNIFICANT DISCUSSIONS AND AGREEMENTS ACHIEVED. DISTRIBUTE THE MEETING MINUTES TO EVERYONE CONCERNED, INCLUDING OWNER AND ARCHITECT, WITHIN THREE DAYS OF THE MEETING.
B. PRE-CONSTRUCTION CONFERENCE: SCHEDULE AND CONDUCT A PRE-CONSTRUCTION CONFERENCE BEFORE STARTING CONSTRUCTION, AT A TIME CONVENIENT TO OWNER AND ARCHITECT, BUT NO LATER THAN 15 DAYS AFTER EXECUTION OF THE AGREEMENT.
   1. CONDUCT THE CONFERENCE TO REVIEW RESPONSIBILITIES AND PERSONNEL ASSIGNMENTS.
   2. ATTENDEES: AUTHORIZED REPRESENTATIVES OF OWNER, OWNER'S COMMISSIONING AUTHORITY, CONSTRUCTION MANAGER, ARCHITECT, AND THEIR CONSULTANTS; CONTRACTOR AND ITS SUPERINTENDENT; MAJOR SUBCONTRACTORS; SUPPLIERS; AND OTHER CONCERNED PARTIES SHALL ATTEND THE CONFERENCE. PARTICIPANTS AT THE CONFERENCE SHALL BE FAMILIAR WITH PROJECT AND AUTHORIZED TO CONCLUDE MATTERS RELATING TO THE WORK.
   3. MINUTES: ENTITY RESPONSIBLE FOR CONDUCTING MEETING WILL RECORD AND DISTRIBUTE MEETING MINUTES.
C. PRE-INSTALLATION CONFERENCES: CONDUCT A PRE-INSTALLATION CONFERENCE AT PROJECT SITE BEFORE EACH CONSTRUCTION ACTIVITY THAT REQUIRES COORDINATION WITH OTHER CONSTRUCTION.
   1. ATTENDEES: INSTALLER AND REPRESENTATIVES OF MANUFACTURERS AND FABRICATORS INVOLVED IN OR AFFECTED BY THE INSTALLATION AND ITS COORDINATION OR INTERFACE WITH OTHER MATERIALS AND INSTALLATIONS THAT HAVE PRECEDED OR WILL FOLLOW, SHALL ATTEND THE MEETING. ADVISE ARCHITECT OF SCHEDULED MEETING DATES.
   2. RECORD SIGNIFICANT CONFERENCE DISCUSSIONS, AGREEMENTS, AND DISAGREEMENTS, INCLUDING REQUIRED CORRECTIVE MEASURES AND ACTIONS.
   3. REPORTING: DISTRIBUTE MINUTES OF THE MEETING TO EACH PARTY PRESENT AND TO OTHER PARTIES REQUIRING INFORMATION.
   4. DO NOT PROCEED WITH INSTALLATION IF THE CONFERENCE CANNOT BE SUCCESSFULLY CONCLUDED. INITIATE WHATEVER ACTIONS ARE NECESSARY TO RESOLVE IMPEDIMENTS TO PERFORMANCE OF THE WORK AND RECONVENE THE CONFERENCE AT EARLIEST FEASIBLE DATE.
D. PROGRESS MEETINGS: CONDUCT PROGRESS MEETINGS AT AGREED UPON INTERVALS.
   1. COORDINATE DATES OF MEETINGS WITH PREPARATION OF PAYMENT REQUESTS.
   2. ATTENDEES: IN ADDITION TO REPRESENTATIVES OF OWNER, OWNER'S COMMISSIONING AUTHORITY, CONSTRUCTION MANAGER, AND ARCHITECT, EACH CONTRACTOR, AND OTHER ENTITY CONCERNED WITH CURRENT PROGRESS OR INVOLVED IN PLANNING, COORDINATION, OR PERFORMANCE OF FUTURE ACTIVITIES SHALL BE REPRESENTED AT THESE MEETINGS. ALL PARTICIPANTS AT THE MEETING SHALL BE FAMILIAR WITH PROJECT AND AUTHORIZED TO CONCLUDE MATTERS RELATING TO THE WORK.
   3. MINUTES: ENTITY RESPONSIBLE FOR CONDUCTING THE MEETING WILL RECORD AND DISTRIBUTE THE MEETING MINUTES TO EACH PARTY PRESENT AND TO OTHER PARTIES REQUIRING INFORMATION.
      a. SCHEDULE UPDATING: REVISE CONTRACTOR'S CONSTRUCTION SCHEDULE AFTER EACH PROGRESS MEETING WHERE REVISIONS TO THE SCHEDULE HAVE BEEN MADE OR RECOGNIZED. ISSUE REVISED SCHEDULE CONCURRENTLY WITH THE REPORT OF EACH MEETING.
E. COORDINATION MEETINGS: CONDUCT PROJECT COORDINATION MEETINGS AT REGULAR INTERVALS. PROJECT COORDINATION MEETINGS ARE IN ADDITION TO SPECIFIC MEETINGS HELD FOR OTHER PURPOSES, SUCH AS PROGRESS MEETINGS AND PRE-INSTALLATION CONFERENCES.
   1. ATTENDEES: IN ADDITION TO REPRESENTATIVES OF OWNER AND ARCHITECT, EACH CONTRACTOR, SUBCONTRACTOR, SUPPLIER, AND OTHER ENTITY CONCERNED WITH CURRENT PROGRESS OR INVOLVED IN PLANNING, COORDINATION OF FUTURE ACTIVITIES SHALL BE REPRESENTED AT THESE MEETINGS. ALL PARTICIPANTS AT THE MEETINGS SHALL BE FAMILIAR WITH PROJECT AND AUTHORIZED TO CONCLUDE MATTERS RELATING TO THE WORK.
   2. REPORTING: RECORD MEETING RESULTS AND DISTRIBUTE COPIES TO EVERYONE IN ATTENDANCE AND TO OTHERS AFFECTED BY DECISIONS OR ACTIONS RESULTING FROM EACH MEETING.

## 01 32 00 - CONSTRUCTION PROGRESS DOCUMENTATION

1.1 INFORMATIONAL SUBMITTALS

A. FORMAT FOR SUBMITTALS: ELECTRONICALLY SUBMIT REQUIRED SUBMITTAL DOCUMENTS IN PORTABLE DOCUMENT FORMAT (I.E., PDF'S)
B. CONTRACTOR'S CONSTRUCTION SCHEDULE: INITIAL SCHEDULE, OF SIZE REQUIRED TO DISPLAY ENTIRE SCHEDULE FOR ENTIRE CONSTRUCTION PERIOD.

1.2 COORDINATION

A. COORDINATE PREPARATION AND PROCESSING OF SCHEDULES AND REPORTS WITH PERFORMANCE OF CONSTRUCTION ACTIVITIES AND WITH SCHEDULING AND REPORTING OF SEPARATE CONTRACTORS.

1.3 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

A. TIME FRAME: EXTEND SCHEDULE FROM DATE ESTABLISHED FOR COMMENCEMENT OF THE WORK TO DATE OF SUBSTANTIAL COMPLETION.
   1. CONTRACT COMPLETION DATE SHALL NOT BE CHANGED BY SUBMISSION OF A SCHEDULE THAT SHOWS AN EARLY COMPLETION DATE, UNLESS SPECIFICALLY AUTHORIZED BY CHANGE ORDER.
B. ACTIVITIES: TREAT EACH STORY OR SEPARATE AREA AS A SEPARATE NUMBERED ACTIVITY FOR EACH PRINCIPAL ELEMENT OF THE WORK.
C. MILESTONES: INCLUDE MILESTONES INDICATED IN THE CONTRACT DOCUMENTS IN SCHEDULE, INCLUDING, BUT NOT LIMITED TO, THE NOTICE TO PROCEED, SUBSTANTIAL COMPLETION, AND FINAL COMPLETION.
D. COMPUTER SCHEDULING SOFTWARE: PREPARE SCHEDULE USING CURRENT VERSION OF A PROGRAM THAT HAS BEEN DEVELOPED SPECIFICALLY TO MANAGE CONSTRUCTION SCHEDULES.

1.4 CONTRACTOR'S CONSTRUCTION SCHEDULE

A. A. FORMAT:
   1. SUBMIT A HORIZONTAL BAR CHART WITH SEPARATE LINE FOR EACH MAJOR SECTION OF WORK IDENTIFYING FIRST WORK DAY OF EACH WEEK.
   2. SEQUENCE OF LISTINGS: THE CHRONOLOGICAL ORDER OF THE START OF EACH ITEM OF WORK.
   3. SCALE AND SPACING: TO PROVIDE SPACE FOR NOTATIONS AND REVISIONS.
   4. SHEET SIZE: MINIMUM 11 BY 17 INCHES.
B. CONTENT:
   1. SHOW COMPLETE SEQUENCE OF CONSTRUCTION BY ACTIVITY, WITH DATES FOR BEGINNING AND COMPLETION OF EACH ELEMENT OF CONSTRUCTION.
   2. IDENTIFY EACH ITEM BY MAJOR SPECIFICATION SECTION NUMBER.
   3. INDICATE THE EARLY AND LATE START, EARLY AND LATE FINISH, FLOAT DATES, AND DURATION.
   4. IDENTIFY WORK OF SEPARATE STAGES OR SEPARATE FLOORS OR BUILDINGS, AND OTHER LOGICALLY GROUPED ACTIVITIES.
   5. PROVIDE SUB_ SCHEDULES TO DEFINE CRITICAL PORTIONS OF ENTIRE SCHEDULE.

## 01 32 99 - CONSTRUCTION PROGRESS DOCUMENTATION (CONT)

   6. SHOW ACCUMULATED PERCENTAGE OF COMPLETION OF EACH ITEM, AND TOTAL PERCENTAGE OF WORK COMPLETED, AS OF THE FIRST DAY OF EACH MONTH.
   7. INDICATE SUBMITTAL DATES REQUIRED FOR SHOP DRAWINGS, PRODUCT DATA, SAMPLES, AND PRODUCT DELIVERY DATES, INCLUDING THOSE FURNISHED BY OWNER.
   8. SHOW DELIVERY DATES FOR OWNER-FURNISHED PRODUCTS.
   9. COORDINATE CURRENT SCHEDULE OF VALUES SPECIFIED IN SECTION 012281.
C. REVISIONS TO SCHEDULES:
   1. INDICATE CHANGES OF EACH ACTIVITY TO DATE OF SUBMITTAL, AND PROJECTED COMPLETION DATE OF EACH ACTIVITY.
   2. IDENTIFY ACTIVITIES MODIFIED SINCE PREVIOUS SUBMITTAL, MAJOR CHANGES IN SCOPE, AND OTHER IDENTIFIABLE CHANGES.
   3. PROVIDE NARRATIVE REPORT TO DEFINE PROBLEM AREAS, ANTICIPATED DELAYS, AND IMPACT ON SCHEDULE. REPORT CORRECTIVE ACTION TAKEN, OR PROPOSED, AND ITS EFFECT.
   4. UPDATE REGULARLY.

## 01 33 00 - SUBMITTAL PROCEDURES

1.1 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

A. COORDINATION: COORDINATE PREPARATION AND PROCESSING OF SUBMITTALS WITH PERFORMANCE OF CONSTRUCTION ACTIVITIES.
   1. COORDINATE EACH SUBMITTAL WITH FABRICATION, PURCHASING, TESTING, DELIVERY, OTHER SUBMITTALS, AND RELATED ACTIVITIES THAT REQUIRE SEQUENTIAL ACTIVITY.
   2. SUBMIT ALL SUBMITTAL ITEMS REQUIRED FOR EACH SPECIFICATION SECTION CONCURRENTLY UNLESS PARTIAL SUBMITTALS FOR PORTIONS OF THE WORK ARE APPROVED BY ARCHITECT.
   3. COORDINATE TRANSMITTAL OF DIFFERENT TYPES OF SUBMITTALS FOR RELATED PARTS OF THE WORK SO PROCESSING WILL NOT BE DELAYED BECAUSE OF NEED TO REVIEW SUBMITTALS CONCURRENTLY FOR COORDINATION.
   4. ARCHITECT RESERVES THE RIGHT TO WITHHOLD ACTION ON A SUBMITTAL REQUIRING COORDINATION WITH OTHER SUBMITTALS UNTIL RELATED SUBMITTALS ARE RECEIVED.
B. IDENTIFICATION AND INFORMATION: IDENTIFY AND INCORPORATE INFORMATION IN EACH ELECTRONIC SUBMITTAL FILE AS FOLLOWS:
   1. ASSEMBLE COMPLETE SUBMITTAL PACKAGE INTO A SINGLE INDEXED FILE WITH LINKS ENABLING NAVIGATION TO EACH ITEM.
   2. NAME FILE WITH SUBMITTAL NUMBER OR OTHER UNIQUE IDENTIFIER, INCLUDING REVISION IDENTIFIER.
      a. FOR TYPICAL SUBMITTALS FOR PORTIONS OF THE WORK, INCLUDE SPECIFICATION SECTION NUMBER OR SUB THE SUBMITTAL FILE NAME SHALL USE SPECIFICATION SECTION NUMBER FOLLOWED BY A DASH AND THEN A SEQUENTIAL NUMBER. RESUBMITTALS SHALL ADD A NUMERICAL SUFFIX AFTER ANOTHER DASH, INCLUDE BRIEF DESCRIPTION OF SUBMITTAL AFTER SEQUENTIAL NUMBER OR RESUBMITTAL SUFFIX, (E.G., 061000-01-THROUGH CARPENTRY).
      b. FOR COMPLEX PROJECTS THAT REQUIRE PROJECT IDENTIFIER FOR SEPARATE BUILDINGS WITH IN A PROJECT OR PHASE, FOR INDIVIDUAL SUBMITTALS TO BE SUBMITTED BY MULTIPLE SUBCONTRACTORS, THE SUBMITTAL FILE NAME SHALL FOLLOW THE FOLLOWING: SPECIFICATION SECTION NUMBER FOLLOWED BY A DECIMAL POINT AND THEN A SEQUENTIAL NUMBER. PROVIDE MEANS FOR INSERTION TO PERMANENTLY RECORD CONTRACTOR'S REVIEW AND APPROVAL DATES AND ACTION TAKEN BY ARCHITECT.
C. OPTIONS: IDENTIFY OPTIONS REQUIRING SELECTION BY THE ARCHITECT.
D. DEVIATIONS: IDENTIFY DEVIATIONS FROM THE CONTRACT DOCUMENTS ON SUBMITTALS.
E. DISTRIBUTION: FURNISH COPIES OF FINAL SUBMITTALS TO MANUFACTURERS, SUBCONTRACTORS, SUPPLIERS, FABRICATORS, INSTALLERS, AUTHORITIES HAVING JURISDICTION, AND OTHERS AS NECESSARY FOR PERFORMANCE OF CONSTRUCTION ACTIVITIES. SHOW DISTRIBUTION ON TRANSMITTAL FORMS.
F. USE FOR CONSTRUCTION: USE ONLY FINAL SUBMITTALS THAT ARE NOTED: "RECEIVED", "FURNISHES CORRECTED" NOTATION FROM ARCHITECT'S ACTION STAMP, OR WITH APPROVAL NOTATION FROM ALTERNATE REVIEWER.

1.2 SUBMITTAL PROCEDURES

A. GENERAL SUBMITTAL PROCEDURE REQUIREMENTS: PREPARE AND SUBMIT SUBMITTALS REQUIRED BY INDIVIDUAL SPECIFICATION SECTIONS. TYPES OF SUBMITTALS ARE INDICATED IN INDIVIDUAL SPECIFICATION SECTIONS.
   1. EMAIL OR UPLOAD ELECTRONIC SUBMITTALS AS PDF ELECTRONIC FILES DIRECTLY TO ARCHITECT.
      a. ARCHITECT WILL RETURN MARKED-UP FILES; APPROVED SUBMITTALS WILL BE PLACED IN ELECTRONIC PROJECT RECORD DOCUMENT FILE.
   2. ACTION SUBMITTALS: PRINT EACH LARGE-FORMAT DRAWINGS AND SUBMITTALS (LARGER THAN 11 X 17), SUBMIT PDF FILE PLUS 2 HARD COPIES. FOR SMALLER FORMAT DRAWINGS AND SUBMITTALS (11X17 OR LESS), PROVIDE PDF FILE PLUS 2 HARD COPIES.
B. PRODUCT DATA: COLLECT INFORMATION INTO A SINGLE SUBMITTAL FOR EACH ELEMENT OF CONSTRUCTION AND TYPE OF PRODUCT OR EQUIPMENT.
   1. IF INFORMATION MUST BE SPECIALLY PREPARED FOR SUBMITTAL BECAUSE STANDARD PUBLISHED DATA ARE NOT SUITABLE FOR USE, SUBMIT AS SHOP DRAWINGS, NOT AS PRODUCT DATA.
   2. MARK EACH COPY TO IDENTIFY APPLICABLE PRODUCTS, MODELS, OPTIONS, AND OTHER DATA.
   3. SUBMIT PRODUCT DATA IN THE FOLLOWING FORMAT:
      a. PDF ELECTRONIC FILE.
C. SHOP DRAWINGS: PREPARE PROJECT-SPECIFIC INFORMATION, DRAWN ACCURATELY TO SCALE. DO NOT BASE SHOP DRAWINGS ON REPRODUCTIONS OF THE CONTRACT DOCUMENTS OR STANDARD PRINTED DATA.
   1. PREPARATION: FULLY ILLUSTRATE REQUIREMENTS IN THE CONTRACT DOCUMENTS.
   2. SHEET SIZE: EXCEPT FOR TEMPLATES, PATTERNS, AND SIMILAR FULL-SIZE DRAWINGS, SUBMIT SHOP DRAWINGS ON SHEETS AT LEAST 8-1/2 BY 11 INCHES BUT NO LARGER THAN 30 BY 42 INCHES SUBMIT SHOP DRAWINGS IN THE FOLLOWING FORMAT:
      a. FOR LARGE-FORMAT DRAWINGS AND SUBMITTALS (LARGER THAN 11 X 17), SUBMIT PDF FILE PLUS 2 HARD COPIES. FOR SMALLER FORMAT DRAWINGS AND SUBMITTALS (11X17 OR LESS), PROVIDE ONLY PDF FILE, ARCHITECT WILL RETURN ONLY THE MARKED-UP PDF.
D. SAMPLES: SUBMIT SAMPLES FOR REVIEW OF KIND, COLOR, PATTERN, AND TEXTURE FOR A CHECK OF THESE CHARACTERISTICS WITH OTHER ELEMENTS AND FOR A COMPARISON OF THESE CHARACTERISTICS BETWEEN SUBMITTAL AND ACTUAL COMPONENT AS DELIVERED AND INSTALLED.
   1. TRANSMIT SAMPLES THAT CONTAIN MULTIPLE, INTERRELATED COMPONENTS AS INDICATED IN SPECIFICATIONS.
   2. MANUFACTURER CERTIFICATES: SUBMIT WRITTEN STATEMENTS ON MANUFACTURER'S LETTERHEAD CERTIFYING THAT MANUFACTURER COMPLIES WITH REQUIREMENTS IN THE CONTRACT DOCUMENTS. INCLUDE EVIDENCE OF MANUFACTURING EXPERIENCE WHERE REQUIRED.
   3. PRODUCT CERTIFICATES: SUBMIT WRITTEN STATEMENTS ON MANUFACTURER'S LETTERHEAD CERTIFYING THAT PRODUCT COMPLIES WITH REQUIREMENTS IN THE CONTRACT DOCUMENTS.
   4. MATERIAL CERTIFICATES: SUBMIT WRITTEN STATEMENTS ON MANUFACTURER'S LETTERHEAD CERTIFYING THAT MATERIAL COMPLIES WITH REQUIREMENTS IN THE CONTRACT DOCUMENTS.

1.3 CONTRACTOR'S REVIEW

A. ACTION AND INFORMA BIONAL SUBMITTALS: REVIEW EACH SUBMITTAL AND CHECK FOR COORDINATION WITH OTHER WORK OF THE CONTRACT AND FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS. NOTE CORRECTIONS AND FIELD DIMENSIONS. MARK WITH APPROVAL STAMP BEFORE SUBMITTING TO ARCHITECT.
B. PROJECT CLOSEOUT AND MAINTENANCE MATERIAL SUBMITTALS: REFER TO REQUIREMENTS IN DIVISION 01 SECTION "CLOSEOUT PROCEDURES."
C. APPROVAL STAMP: STAMP EACH SUBMITTAL WITH A UNIFORM APPROVAL STAMP. INCLUDE PROJECT NAME AND LOCATION, SUBMITTAL NUMBER, SPECIFICATION SECTION TITLE AND NUMBER, NAME OF REVIEWER, DATE OF CONTRACTOR'S APPROVAL, AND STATEMENT CERTIFYING THAT SUBMITTAL HAS BEEN REVIEWED, CHECKED, AND APPROVED FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS.

1.4 ARCHITECT'S ACTION

A. GENERAL: ARCHITECT WILL NOT REVIEW SUBMITTALS THAT DO NOT BEAR CONTRACTOR'S APPROVAL STAMP AND WILL RETURN THEM WITHOUT ACTION.
B. ACTION SUBMITTALS: ARCHITECT WILL REVIEW EACH SUBMITTAL, MAKE MARKS TO INDICATE CORRECTIONS OR MODIFICATIONS REQUIRED, AND RETURN IT. ARCHITECT WILL STAMP EACH SUBMITTAL WITH AN ACTION STAMP AND WILL MARK STAMP APPROPRIATELY TO INDICATE ACTION, AS FOLLOWS:
   1. NO EXCEPTIONS TAKEN
   2. MAKE CORRECTIONS NOTED
   3. FOR REVIEW ONLY
   4. REVISE AND RESUBMIT
   5. REJECTED
   6. SUBMIT SPECIFIED ITEM.
C. INFORMATIONAL SUBMITTALS: ARCHITECT WILL REVIEW EACH SUBMITTAL AND WILL NOT RETURN IT, OR WILL RETURN IT IF IT DOES NOT COMPLY WITH REQUIREMENTS. ARCHITECT WILL FORWARD EACH SUBMITTAL TO APPROPRIATE PARTY.
D. PARTIAL SUBMITTALS PREPARED FOR A PORTION OF THE WORK WILL BE REVIEWED WHEN USE OF PARTIAL SUBMITTALS HAS RECEIVED PRIOR APPROVAL FROM ARCHITECT.
E. INCOMPLETE SUBMITTALS ARE NOT ACCEPTABLE, WILL BE CONSIDERED NON-RESPONSIVE, AND WILL BE RETURNED WITHOUT REVIEW.
F. SUBMITTALS NOT REQUIRED BY THE CONTRACT DOCUMENTS MAY NOT BE REVIEWED AND MAY BE DISCARDED.

## 01 45 00 - QUALITY REQUIREMENTS

1.1 CONFLICTING REQUIREMENTS

A. REFERENCED STANDARDS: IF COMPLIANCE WITH TWO OR MORE STANDARDS IS SPECIFIED AND THE STANDARDS ESTABLISH DIFFERENT OR CONFLICTING REQUIREMENTS FOR MINIMUM QUANTITIES OR QUALITY LEVELS, COMPLY WITH THE MOST STRINGENT REQUIREMENT. REFER CONFLICTING REQUIREMENTS THAT ARE DIFFERENT, BUT APPARENTLY EQUAL, TO ARCHITECT FOR A DECISION BEFORE PROCEEDING.
B. MINIMUM QUANTITY OR QUALITY LEVELS: THE QUANTITY OR QUALITY LEVEL SHOWN OR SPECIFIED SHALL BE THE MINIMUM PROVIDED OR PERFORMED. THE ACTUAL INSTALLATION MAY COMPLY EXACTLY WITH THE MINIMUM QUANTITY OR QUALITY SPECIFIED, OR IT MAY EXCEED THE MINIMUM WITHIN REASONABLE LIMITS. TO COMPLY WITH THESE REQUIREMENTS, INDICATED NUMERIC VALUES ARE MINIMUM OR MAXIMUM, AS APPROPRIATE, FOR THE CONTEXT OF REQUIREMENTS. REFER UNCERTAINTIES TO ARCHITECT FOR A DECISION BEFORE PROCEEDING.

1.2 QUALITY ASSURANCE

A. GENERAL: QUALIFICATIONS PARAGRAPHS IN THIS ARTICLE ESTABLISH THE MINIMUM QUALIFICATION LEVELS REQUIRED FOR INDIVIDUALS AND ENTITIES WHO PERFORM SPECIFIED, CRITICAL OR CONFIDENCE-BUILDING ACTIVITIES.
B. MANUFACTURER QUALIFICATIONS: A FIRM EXPERIENCED IN MANUFACTURING PRODUCTS OR SYSTEMS SIMILAR TO THOSE INDICATED FOR THIS PROJECT AND WITH A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE, AS WELL AS SUFFICIENT PRODUCTION CAPACITY TO PRODUCE REQUIRED UNITS.
C. FABRICATOR QUALIFICATIONS: A FIRM EXPERIENCED IN PRODUCING PRODUCTS SIMILAR TO THOSE INDICATED FOR THIS PROJECT AND WITH A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE, AS WELL AS SUFFICIENT PRODUCTION CAPACITY TO PRODUCE REQUIRED UNITS.
D. INSTALLER QUALIFICATIONS: A FIRM OR INDIVIDUAL EXPERIENCED IN INSTALLING, ERECTING, OR ASSEMBLING WORK SIMILAR IN MATERIAL, DESIGN, AND EXTENT TO THAT INDICATED FOR THIS PROJECT, WHOSE WORK HAS RESULTED IN CONSTRUCTION WITH A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE.
E. TESTING AGENCY QUALIFICATIONS: AN INTL, AN IAALAP, OR AN INDEPENDENT AGENCY WITH THE EXPERIENCE AND CAPABILITY TO CONDUCT TESTING AND INSPECTING INDICATED, AS DOCUMENTED ACCORDING TO ASTM E 329, AND WITH ADDITIONAL QUALIFICATIONS SPECIFIED IN INDIVIDUAL SECTIONS; AND WHERE REQUIRED BY AUTHORITIES HAVING JURISDICTION, THAT IS ACCEPTABLE TO AUTHORITIES.

## 01 45 00 - QUALITY REQUIREMENTS (CONT)

F. MANUFACTURER'S TECHNICAL REPRESENTATIVE QUALIFICATIONS: AN AUTHORIZED REPRESENTATIVE OF MANUFACTURER WHO IS TRAINED AND APPROVED BY MANUFACTURER TO INSPECT INSTALLATION OF MANUFACTURER'S PRODUCTS THAT ARE SIMILAR IN MATERIAL, DESIGN, AND EXTENT TO THOSE INDICATED FOR THIS PROJECT.
G. FACTORY-AUTHORIZED SERVICE REPRESENTATIVE QUALIFICATIONS: AN AUTHORIZED REPRESENTATIVE OF MANUFACTURER WHO IS TRAINED AND APPROVED BY MANUFACTURER TO INSPECT INSTALLATION OF MANUFACTURER'S PRODUCTS THAT ARE SIMILAR IN MATERIAL, DESIGN, AND EXTENT TO THOSE INDICATED FOR THIS PROJECT.
H. MOCKUPS: BEFORE INSTALLING PORTIONS OF THE WORK REQUIRING MOCKUPS, BUILD MOCKUPS FOR EACH FORM OF CONSTRUCTION AND FINISH INDICATED IN THE TECHNICAL SPECIFICATIONS.
   1. BUILD MOCKUPS IN LOCATION AND OF SIZE INDICATED OR, IF NOT INDICATED, AS DIRECTED BY ARCHITECT.
   2. DEMONSTRATE THE PROPOSED RANGE OF AESTHETIC EFFECTS AND WORKMANSHIP.
   3. OBTAIN ARCHITECT'S ACCEPTANCE OF MOCKUPS BEFORE STARTING FINAL FABRICATION, OR CONSTRUCTION.
   4. MAINTAIN MOCKUPS DURING CONSTRUCTION IN AN UNDISTURBED CONDITION AS A STANDARD FOR JUDGING THE COMPLETED WORK.
   5. DEMOLISH AND REMOVE MOCKUPS WHEN DIRECTED, UNLESS OTHERWISE INDICATED.

1.3 QUALITY CONTROL

A. CONTRACTOR RESPONSIBILITIES: TESTS AND INSPECTIONS NOT EXPLICITLY ASSIGNED TO OWNER ARE CONTRACTOR'S RESPONSIBILITY. PERFORM ADDITIONAL QUALITY-CONTROL ACTIVITIES REQUIRED TO VERIFY THAT THE WORK COMPLIES WITH REQUIREMENTS, WHETHER SPECIFIED OR NOT.
   1. UNLESS OTHERWISE INDICATED, PROVIDE QUALITY-CONTROL SERVICES SPECIFIED AND THOSE REQUIRED BY AUTHORITIES HAVING JURISDICTION. PERFORM QUALITY-CONTROL SERVICES REQUIRED OF CONTRACTOR BY AUTHORITIES HAVING JURISDICTION, WHETHER SPECIFIED OR NOT.
   2. WHERE SERVICES ARE INDICATED AS CONTRACTOR'S RESPONSIBILITY, ENGAGE A QUALIFIED TESTING AGENCY TO PERFORM THESE QUALITY-CONTROL SERVICES.
      a. CONTRACTOR'S RESPONSIBILITIES INCLUDE ESCORTING AND FACILITATING THE TESTING AGENCY'S SERVICES.
      b. COOPERATE WITH TESTING AGENCIES AT LEAST 24 HOURS IN ADVANCE OF TIME WHEN WORK THAT REQUIRES TESTING OR INSPECTING WILL BE PERFORMED.
      c. WHERE QUALITY-CONTROL SERVICES ARE INDICATED AS CONTRACTOR'S RESPONSIBILITY, SUBMIT A CERTIFIED WRITTEN REPORT, IN DUPLICATE, OF EACH QUALITY-CONTROL SERVICE.
      d. TESTING AND INSPECTING REQUESTED BY CONTRACTOR AND NOT REQUIRED BY THE CONTRACT DOCUMENTS ARE CONTRACTOR'S RESPONSIBILITY.
      e. SUBMIT ADDITIONAL COPIES OF EACH WRITTEN REPORT DIRECTLY TO AUTHORITIES HAVING JURISDICTION, WHEN THEY SO DIRECT.
B. MANUFACTURER'S FIELD SERVICES: WHERE INDICATED, ENGAGE A FACTORY-AUTHORIZED SERVICE REPRESENTATIVE TO INSPECT FIELD ASSEMBLY, COMPONENTS AND EQUIPMENT INSTALLATION, INCLUDING SERVICE CONNECTIONS. REPORT RESULTS IN WRITING AS SPECIFIED IN DIVISION 01 SECTION "SUBMITTAL PROCEDURES."
C. MANUFACTURER'S TECHNICAL SERVICES: WHERE INDICATED, ENGAGE A MANUFACTURER'S TECHNICAL REPRESENTATIVE TO OBSERVE AND INSPECT THE WORK. MANUFACTURER'S TECHNICAL REPRESENTATIVES' SERVICES INCLUDE PREINSTALLATION MEETINGS, ON-SITE INSTALLATION INSPECTION, CONFIRMATION OF SUBSTITUTES AND CONDITIONS, VERIFICATION OF MATERIALS, OBSERVATION OF INSTALLER ACTIVITIES, INSPECTION OF COMPLETED PORTIONS OF THE WORK, AND SUBMITTAL OF WRITTEN REPORTS.
D. TESTING AGENCY RESPONSIBILITIES: COOPERATE WITH ARCHITECT AND CONTRACTOR IN PERFORMANCE OF DUTIES. PROVIDE QUALIFIED PERSONNEL TO PERFORM REQUIRED TESTS AND INSPECTIONS.
   1. NOTIFY ARCHITECT AND CONTRACTOR PROMPTLY OF IRREGULARITIES OR DEFICIENCIES OBSERVED IN THE WORK DURING PERFORMANCE OF ITS SERVICES.
   2. DETERMINE THE LOCATION FROM WHICH TEST SAMPLES WILL BE TAKEN AND IN WHICH IN-SITU TESTS ARE CONDUCTED.
   3. CONDUCT AND INTERPRET TESTS AND INSPECTIONS AND STATE IN EACH REPORT WHETHER TESTED AND INSPECTED WORK COMPLIES OR D

CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCE

01 79 00 - EXECUTION AND CLOSEOUT REQUIREMENTS (CONT.)

1.13 FINAL CLEANING

A. EXECUTE FINAL CLEANING PRIOR TO FINAL PROJECT ASSESSMENT.
1. CLEAN AREAS TO BE OCCUPIED BY OWNER PRIOR TO FINAL COMPLETION BEFORE OWNER OCCUPANCY.
B. USE CLEANING MATERIALS THAT ARE NONHAZARDOUS.
C. CLEAN INTERIOR AND EXTERIOR GLASS, SURFACES EXPOSED TO VIEW; REMOVE TEMPORARY LABELS, STAINS AND FOREIGN SUBSTANCES. POLISH TRANSPARENT AND GLOSSY SURFACES, VACUUM CARPETED AND SOFT SURFACES.
D. REMOVE ALL LABELS THAT ARE NOT PERMANENT. DO NOT PAINT OR OTHERWISE COVER FIRE TESTLABELS OR NAMEPLATES ON MECHANICAL AND ELECTRICAL EQUIPMENT.
E. CLEAN EQUIPMENT AND FIXTURES TO A SANITARY CONDITION WITH CLEANING MATERIALS APPROPRIATE TO THE SURFACE AND MATERIAL BEING CLEANED.
F. CLEAN FILTERS OF OPERATING EQUIPMENT.
G. CLEAN DEBRIS FROM ROOFS, GUTTERS, DOWNSPOUTS, AND DRAINAGE SYSTEMS.
H. CLEAN SITE: SWEEP PAVED AREAS; RAKE CLEAN LANDSCAPED SITUATION.
I. REMOVE WASTE, SURPLUS MATERIALS, TRASH/RUBBISH, AND CONSTRUCTION FACILITIES FROM THE SITE; DISPOSE OF IN LEGAL MANNER; DO NOT BURN OR BURY.

1.14 CLOSEOUT PROCEDURES

A. MAKE SUBMITTALS THAT ARE REQUIRED BY GOVERNING OR OTHER AUTHORITIES.
1. PROVIDE COPIES TO ARCHITECT.
B. ACCOMPANY PROJECT COORDINATOR ON PRELIMINARY INSPECTION TO DETERMINE ITEMS TO BE LISTED FOR COMPLETION OR CORRECTION IN CONTRACTOR'S NOTICE OF SUBSTANTIAL COMPLETION.
C. NOTIFY ARCHITECT WHEN WORK IS CONSIDERED READY FOR SUBSTANTIAL COMPLETION.
D. SUBMIT WRITTEN CERTIFICATION THAT CONTRACT DOCUMENTS HAVE BEEN REVIEWED, WORK HAS BEEN INSPECTED, AND THAT WORK IS COMPLETE IN ACCORDANCE WITH CONTRACT DOCUMENTS AND READY FOR ARCHITECT'S REVIEW.
E. CORRECT ITEMS OF WORK LISTED IN EXECUTED CERTIFICATES OF SUBSTANTIAL COMPLETION AND COMPLY WITH REQUIREMENTS FOR ACCESS TO OCCUPIED AREAS.
F. NOTIFY ARCHITECT WHEN WORK IS CONSIDERED FINALLY COMPLETE.
G. COMPLETE ITEMS OF WORK DETERMINED BY ARCHITECT'S FINAL INSPECTION.

1.15 MAINTENANCE

A. PROVIDE SERVICE AND MAINTENANCE OF COMPONENTS INDICATED IN SPECIFICATION SECTIONS.
B. MAINTENANCE PERIOD: AS INDICATED IN SPECIFICATION SECTIONS OR, IF NOT INDICATED, NOT LESS THAN ONE YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION OR THE LENGTH OF THE SPECIFIED WARRANTY, WHICHEVER IS LONGEST.
C. EXAMINE SYSTEM COMPONENTS AT A FREQUENCY CONSISTENT WITH RELIABLE OPERATION. CLEAN, ADJUST, AND LUBRICATE AS REQUIRED.
D. INCLUDE SYSTEMATIC EXAMINATION, ADJUSTMENT, AND LUBRICATION OF COMPONENTS. REPAIR OR REPLACE PARTS WHENEVER REQUIRED. USE PARTS PRODUCED BY THE MANUFACTURER OF THE ORIGINAL COMPONENT.
E. MAINTENANCE SERVICE SHALL NOT BE ASSIGNED OR TRANSFERRED TO ANY AGENT OR SUBCONTRACTOR WITHOUT PRIOR WRITTEN CONSENT OF THE OWNER.

05 40 00 - COLD-FORMED METAL FRAMING

1.1 SUBMITTALS

A. PRODUCT DATA: PROVIDE DATA ON STANDARD FRAMING MEMBERS; DESCRIBE MATERIALS AND FINISH, PRODUCT CRITERIA, AND LIMITATIONS.
B. SHOP DRAWINGS: INDICATE COMPONENT DETAILS, FRAMED OPENINGS, BEARING, ANCHORAGE, LOADING, WELDS, AND TYPE AND LOCATION OF FASTENERS, AND ACCESSORIES OR ITEMS REQUIRED OF RELATED WORK.
1. INDICATE STUD AND CEILING JOIST LAYOUT.
2. DESCRIBE METHOD FOR SECURING STUDS TO TRACKS AND FOR BOLTED FRAMING CONNECTIONS.
3. PROVIDE DESIGN ENGINEER'S STAMP ON SHOP DRAWINGS.

1.2 QUALITY ASSURANCE

A. DESIGNER QUALIFICATIONS: DESIGN FRAMING SYSTEM UNDER DIRECT SUPERVISION OF A PROFESSIONAL STRUCTURAL ENGINEER EXPERIENCED IN DESIGN OF THIS WORK AND LICENSED IN THE STATE IN WHICH THE PROJECT IS LOCATED.

1.3 MANUFACTURERS

A. METAL FRAMING, CONNECTORS, AND ACCESSORIES:
1. CLAROMESTEEN DETROIT BRAND JOISTING SYSTEMS LLC: WWW.CLAROMETRICH.COM.
2. MARINO: WWW.MARINOWARE.COM.
3. HE STEEL NETWORK, INC: WWW.STEELNETWORK.COM.

1.4 FRAMING SYSTEM

A. PROVIDE PRIMARY AND SECONDARY FRAMING MEMBERS, BRIDGING, BRACING, PLATES, GUSSETS, CLIPS, FITTINGS, REINFORCEMENT, AND FASTENINGS AS REQUIRED TO PROVIDE A COMPLETE FRAMING SYSTEM.
B. DESIGN CRITERIA: PROVIDE COMPLETED FRAMING SYSTEM HAVING THE FOLLOWING CHARACTERISTICS:
1. DESIGN CALCULATE STRUCTURAL CHARACTERISTICS FOR COLD-FORMED STEEL FRAMING MEMBERS ACCORDING TO AISI NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS.
2. STRUCTURAL PERFORMANCE: DESIGN, ENGINEER, FABRICATE, AND ERECT TO WITHSTAND SPECIFIED DESIGN LOADS FOR PROJECT CONDITIONS WITHIN REQUIRED LIMITS.
3. DESIGN LOADS: IN ACCORDANCE WITH APPLICABLE CODES.
4. LIVE LOAD DEFLECTION MEETING THE FOLLOWING, UNLESS OTHERWISE INDICATED:
a. EXTERIOR WALLS: MAXIMUM HORIZONTAL DEFLECTION UNDER WIND LOAD OF 1/360 OF SPAN FOR MASONRY, AND 1/240 OF SPAN FOR METAL WALL PANELS AND EIFS.
5. ABLE TO TOLERATE MOVEMENT OF COMPONENTS WITHOUT DAMAGE, FAILURE OF JOINT SEALS, UNDUE STRESS ON FASTENERS, OR OTHER DETRIMENTAL EFFECTS WHEN SUBJECT TO SEASONAL OR CYCLIC DAYNIGHT TEMPERATURE RANGES.
6. ABLE TO ACCOMMODATE CONSTRUCTION TOLERANCES, DEFLECTION OF BUILDING STRUCTURAL MEMBERS, AND CLEARANCES OF INTENDED OPENINGS.

1.5 FRAMING MATERIALS

A. STUDS AND TRACK: ASTM C955; STUDS FORMED TO CHANNEL, "C", OR "SIGMA" SHAPE WITH PUNCHED WEB; U-SHAPED TRACK; STUDS SIZED SO NOMINAL WIDTH AND COMPATIBLE HEIGHT.
1. GAGE AND DEPTH: AS REQUIRED TO MEET SPECIFIED PERFORMANCE LEVELS, BUT NOT LESS THAN 16 GAGE AT 16 INCHES ON CENTER.
2. GALVANIZED IN ACCORDANCE WITH ASTM A653 G90 COATING.
3. PROVIDE COMPONENTS FABRICATED FROM ASTM A1008/A1008M, DESIGNATION SS STEEL.
B. CANOPY FRAMING
1. MANUFACTURER'S STANDARD C-SHAPED STEEL SECTIONS, OF WEB DEPTHS INDICATED, UNPUNCHED, WITH STIFFENED FLANGES, AND AS FOLLOWS:
a. MINIMUM BASE-METAL THICKNESS, AS REQUIRED BY DESIGN.
b. FLANGE WIDTH: 1-5/8 INCHES, MINIMUM.
c. SECTION PROPERTIES: AS REQUIRED BY DESIGN.
2. BUILT-UP MEMBERS: BUILT-UP MEMBERS OF MANUFACTURER'S STANDARD C-SHAPED STEEL SECTION, WITH STIFFENED FLANGES, NESTED INTO A U-SHAPED STEEL SECTION JOIST TRACK, WITH UNSTIFFENED FLANGES, UNPUNCHED; OF WEB DEPTH INDICATED, AND AS FOLLOWS:
a. MINIMUM BASE-METAL THICKNESS: AS REQUIRED BY DESIGN.
b. FLANGE WIDTH: 1-5/8 INCHES, MINIMUM.
C. FRAMING CONNECTORS: FACTORY-MADE FORMED STEEL SHEET, ASTM A653 SS GRADE 50, WITH G90 HOT DIPPED GALVANIZED COATING AND FACTORY PUNCHED HOLES.
1. STRUCTURAL PERFORMANCE: MAINTAIN LOAD AND MOVEMENT CAPACITY REQUIRED BY APPLICABLE CODE, WHEN EVALUATED IN ACCORDANCE WITH AISI NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS; MINIMUM 18 GAGE, 0.04 INCH THICKNESS.
2. MOVEMENT CONNECTIONS: PROVIDE MECHANICAL ANCHORAGE DEVICES THAT ACCOMMODATE MOVEMENT USING SLIDING, DEFORMATION, OR COMBINATION MECHANISMS, WHILE MAINTAINING STRUCTURAL PERFORMANCE OF FRAMING. PROVIDE MOVEMENT CONNECTIONS WHERE INDICATED ON DRAWINGS.
a. WHERE CONTINUOUS STUDS BYPASS ELEVATED FLOOR SLAB, CONNECT STUD TO SLAB IN MANNER ALLOWING VERTICAL AND HORIZONTAL MOVEMENT OF SLAB WITHOUT AFFECTING STUDS; ALLOW FOR MINIMUM MOVEMENT OF 1/2 INCH.
b. WHERE TOP OF STUD WALL TERMINATES BELOW STRUCTURAL FLOOR OR ROOF, CONNECT STUDS TO STRUCTURE IN MANNER ALLOWING VERTICAL AND HORIZONTAL MOVEMENT OF SLAB WITHOUT AFFECTING STUDS; ALLOW FOR MINIMUM MOVEMENT OF 1/2 INCH.
c. PROVIDE TOP TRACK PREASSEMBLED WITH CONNECTION DEVICES SPACED TO FIT STUD SPACING INDICATED ON DRAWINGS; MINIMUM TRACK LENGTH OF 12 FEET.
3. PROVIDE NON-MOVEMENT CONNECTIONS FOR TIE-DOWN TO FOUNDATION, FLOOR-TO-FLOOR TIE-DOWN, ROOF-TO-WALL TIE-DOWN, JOIST HANGERS, GUSSET PLATES, AND STIFFENERS.

1.6 ACCESSORIES

A. BRACING, FURRING, BRIDGING: FORMED SHEET STEEL, THICKNESS DETERMINED FOR CONDITIONS ENCOUNTERED; FINISH TO MATCH FRAMING COMPONENTS.
B. SHOP AND TOUCH-UP PRIMER: SSPC-PAINT 15, COMPLYING WITH VOC LIMITATIONS OF AUTHORITIES HAVING JURISDICTION.
C. TOUCH-UP PRIMER FOR GALVANIZED SURFACES: SSPC-PAINT 20, TYPE I - INORGANIC, COMPLYING WITH VOC LIMITATIONS OF AUTHORITIES HAVING JURISDICTION.

1.7 FASTENERS

A. SELF-DRILLING, SELF-TAPPING SCREWS, BOLTS, NUTS AND WASHERS: HOT DIP GALVANIZED PER ASTM A153/A153M.
B. ANCHORAGE DEVICES: POWDER ACTUATED.
C. ANCHORAGE DEVICES: POWER ACTUATED.
D. WELDING: IN CONFORMANCE WITH AWS D1.1.

1.8 EXAMINATION

A. VERIFY THAT SUBSTRATE SURFACES ARE READY TO RECEIVE WORK.
B. VERIFY FIELD MEASUREMENTS AND ADJUST INSTALLATION AS REQUIRED.

05 40 00 - COLD-FORMED METAL FRAMING (CONT.)

1.9 INSTALLATION OF STUDS

A. INSTALL COMPONENTS IN ACCORDANCE WITH MANUFACTURERS' INSTRUCTIONS AND ASTM C1007 REQUIREMENTS.
B. ALIGN FLOOR AND CEILING TRACKS; LOCATE TO WALL LAYOUT, SECURE IN PLACE WITH FASTENERS AT MAXIMUM 24 INCHES ON CENTER. COORDINATE INSTALLATION OF SEALANT WITH FLOOR AND CEILING TRACKS.
C. PLACE STUDS AT 16 INCHES ON CENTER; NOT MORE THAN 2 INCHES FROM ABUTTING WALLS AND AT EACH SIDE OF OPENINGS. CONNECT STUDS TO TRACKS USING CLIP AND TIE METHOD.
D. CONSTRUCT CORNERS USING MINIMUM OF THREE STUDS. INSTALL DOUBLE STUDS AT WALL OPENINGS, DOOR AND WINDOW JAMBS.
E. INSTALL LOAD BEARING STUDS FULL LENGTH IN ONE PIECE. SPLICING OF STUDS IS NOT PERMITTED.
F. INSTALL LOAD BEARING STUDS, BRACE, AND REINFORCE TO DEVELOP FULL STRENGTH AND ACHIEVE DESIGN REQUIREMENTS.
G. COORDINATE PLACEMENT OF INSULATION IN MULTIPLE STUD SPACES MADE INACCESSIBLE AFTER ERECTION.
H. INSTALL INTERMEDIATE STUDS ABOVE AND BELOW OPENINGS TO ALIGN WITH WALL STUD SPACING.
I. PROVIDE DEFLECTION ALLOWANCE IN STUD TRACK, DIRECTLY BELOW HORIZONTAL BUILDING FRAMING AT NON-LOAD BEARING FRAMING.
J. ATTACH CROSS STUDS TO STUDS FOR ATTACHMENT OF FIXTURES ANCHORED TO WALLS.
K. INSTALL FRAMING BETWEEN STUDS FOR ATTACHMENT OF MECHANICAL AND ELECTRICAL ITEMS, AND TO PREVENT STUD ROTATION.
L. TOUCH-UP FIELD WELDS AND DAMAGED GALVANIZED SURFACES WITH PRIMER.

1.9 TOLERANCES

A. MAXIMUM VARIATION FROM TRUE POSITION: 1/4 INCH.
B. MAXIMUM VARIATION OF ANY MEMBER FROM PLANE: 1/4 INCH.

05 50 00 - METAL FABRICATIONS

1.1 SUBMITTALS

A. SHOP DRAWINGS: SHOW FABRICATION AND INSTALLATION DETAILS FOR METAL FABRICATIONS.
1. INCLUDE PLANS, ELEVATIONS, SECTIONS, AND DETAILS OF METAL FABRICATIONS AND THEIR CONNECTIONS. SHOW ANCHORAGE AND ACCESSORY ITEMS.
B. DELEGATED-DESIGN SUBMITTAL: PROVIDE DESIGN CALCULATIONS FOR LADDERS AND PLATFORMS, INCLUDING ANALYSIS DATA SIGNED AND SEALED BY THE QUALIFIED PROFESSIONAL ENGINEER RESPONSIBLE FOR THEIR PREPARATION.

1.2 PROJECT CONDITIONS

A. FIELD MEASUREMENTS: VERIFY ACTUAL LOCATIONS OF WALLS AND OTHER CONSTRUCTION CONTIGUOUS WITH METAL FABRICATIONS BY FIELD MEASUREMENTS BEFORE FABRICATION.

1.3 COORDINATION

A. COORDINATE SELECTION OF SHOP PRIMERS WITH TOPCOATS TO BE APPLIED OVER THEM. COMPLY WITH PAINT AND COATING MANUFACTURERS' WRITTEN RECOMMENDATIONS TO ENSURE THAT SHOP PRIMERS AND TOPCOATS ARE COMPATIBLE WITH ONE ANOTHER.
B. COORDINATE INSTALLATION OF ANCHORAGES. FURNISH SETTING DRAWINGS, TEMPLATES, AND DIRECTIONS FOR INSTALLING ANCHORAGES, INCLUDING SLEEVES, CONCRETE INSERTS, ANCHOR BOLTS, AND ITEMS WITH INTEGRAL ANCHORS, THAT ARE TO BE EMBEDDED IN CONCRETE OR MASONRY. DELIVER SUCH ITEMS TO PROJECT SITE IN TIME FOR INSTALLATION.

1.4 METALS, GENERAL

A. METAL SURFACES, GENERAL: PROVIDE MATERIALS WITH SMOOTH, FLAT SURFACES UNLESS OTHERWISE INDICATED. FOR COMPONENTS EXPOSED TO VIEW IN THE COMPLETED WORK, PROVIDE MATERIALS WITHOUT SEAM MARKS, ROLLER MARKS, ROLLED TRADE NAMES, OR BLEMISHES.

1.5 FERROUS METALS

A. STEEL PLATES, SHAPES, AND BARS: ASTM A 36.
B. STEEL PIPE: ASTM A 53/A 53M, STANDARD WEIGHT (SCHEDULE 40) UNLESS OTHERWISE INDICATED.

1.6 FASTENERS

A. GENERAL: UNLESS OTHERWISE INDICATED, PROVIDE TYPE 304 STAINLESS-STEEL FASTENERS FOR EXTERIOR USE AND ZINC-PLATED FASTENERS WITH COATING COMPLYING WITH ASTM B 633 OR ASTM F 1941 CLASS FE/ZN 5, AT EXTERIOR WALLS. SELECT FASTENERS FOR TYPE, GRADE, AND CLASS REQUIRED.

1.7 MISCELLANEOUS MATERIALS

A. WELDING RODS AND BARE ELECTRODES: SELECT ACCORDING TO AWS SPECIFICATIONS FOR METAL ALLOY WELDED.
B. UNIVERSAL SHOP PRIMER: FAST-CURING, LEAD- AND CHROMATE-FREE, UNIVERSAL MODIFIED-ALKYD PRIMER COMPLYING WITH MPI#79 AND COMPATIBLE WITH TOPCOAT.

1.8 FABRICATION, GENERAL

A. SHOP ASSEMBLY: PREASSEMBLE ITEMS IN THE SHOP TO GREATEST EXTENT POSSIBLE. DISASSEMBLE UNITS ONLY AS NECESSARY FOR SHIPPING AND HANDLING LIMITATIONS. USE CONNECTIONS THAT MAINTAIN STRUCTURAL VALUE OF JOINED PIECES. CLEAN, REMOVE UNITS FOR REASSEMBLY AND COORDINATED INSTALLATION.
B. CUT, DRILL, AND PUNCH METALS CLEANLY AND ACCURATELY. REMOVE BURRS AND EASE EDGES TO A RADIUS OF APPROXIMATELY 1/32 INCH UNLESS OTHERWISE INDICATED. REMOVE SHARP OR ROUGH AREAS ON EXPOSED SURFACES.
C. FORM EXPOSED CONNECTIONS WITH HAIRLINE JOINTS, FLUSH AND SMOOTH, USING CONCEALED FASTENERS OR WELDS WHERE POSSIBLE. WHERE EXPOSED FASTENERS ARE REQUIRED, USE PHILLIPS FLAT-HEAD (COUNTERSUNK) FASTENERS UNLESS OTHERWISE INDICATED. LOCATE JOINTS WHERE LEAST CONSPICUOUS.
D. FABRICATE SEAMS AND OTHER CONNECTIONS THAT WILL BE EXPOSED TO WEATHER IN A MANNER TO EXCLUDE WATER. PROVIDE WEEP HOLES WHERE WATER MAY ACCUMULATE.
E. WELD CONNECTIONS AND GRIND SEAMS CONTINUOUSLY TO COMPLY WITH THE FOLLOWING:
1. USE MATERIALS AND METHODS THAT MINIMIZE DISTORTION AND DEVELOP STRENGTH AND CORROSION RESISTANCE OF BASE METALS.
2. OBTAIN FUSION WITHOUT UNDERCUT OR OVERLAP.
3. REMOVE WELDING FLUX IMMEDIATELY.
4. AT EXPOSED CONNECTIONS, FINISH EXPOSED WELDS AND SURFACES SMOOTH AND BLENDED SO NO ROUGHNESS SHOWS AFTER FINISHING AND CONTOUR OF WELDED SURFACE MATCHES THAT OF ADJACENT SURFACE.
F. FORM EXPOSED CONNECTIONS WITH HAIRLINE JOINTS, FLUSH AND SMOOTH, USING CONCEALED FASTENERS OR WELDS WHERE POSSIBLE. WHERE EXPOSED FASTENERS ARE REQUIRED, USE PHILLIPS FLAT-HEAD (COUNTERSUNK) FASTENERS UNLESS OTHERWISE INDICATED. LOCATE JOINTS WHERE LEAST CONSPICUOUS.
G. FABRICATE SEAMS AND OTHER CONNECTIONS THAT WILL BE EXPOSED TO WEATHER IN A MANNER TO EXCLUDE WATER. PROVIDE WEEP HOLES WHERE WATER MAY ACCUMULATE.
H. CUT, DRILL, AND DRESS HOLES IN BOLTED CONNECTIONS SMOOTH AND BURR-FREE, BEFORE ASSEMBLY.
I. PROVIDE FOR ANCHORAGE OF TYPE INDICATED; COORDINATE WITH SUPPORTING STRUCTURE. SPACE ANCHORING DEVICES TO SECURE METAL FABRICATIONS RIGIDLY IN PLACE AND TO SUPPORT INDICATED LOADS.
1. WHERE UNITS ARE INDICATED TO BE CAST INTO CONCRETE OR BUILT INTO MASONRY, EQUIP WITH INTEGRALLY WELDED STEEL STRAP ANCHORS, 1/8 BY 1-1/2 INCHES, WITH A MINIMUM 6-INCH EMBEDMENT AND 2-INCH HOOK, NOT LESS THAN 8 INCHES FROM ENDS AND CORNERS OF UNITS AND 24 INCHES O.C., UNLESS OTHERWISE INDICATED.

1.9 MISCELLANEOUS FRAMING AND SUPPORTS

A. GENERAL: PROVIDE STEEL FRAMING AND SUPPORTS NOT SPECIFIED IN OTHER SECTIONS AS NEEDED TO COMPLETE THE WORK.
B. FABRICATE UNITS FROM STEEL SHAPES, PLATES, AND BARS OF WELDED CONSTRUCTION UNLESS OTHERWISE INDICATED. FABRICATE TO SIZES, SHAPES, AND PROFILES INDICATED AND AS NECESSARY TO RECEIVE ADJACENT CONSTRUCTION.
1. FABRICATE UNITS FROM SLOTTED CHANNEL FRAMING WHERE INDICATED.
C. FABRICATE SUPPORTS FOR OPERABLE PARTITIONS FROM CONTINUOUS STEEL BEAMS OF SIZES (INDICATED) (RECOMMENDED BY PARTITION MANUFACTURER) WITH ATTACHED BEARING PLATES, ANCHORS, AND BRACES AS (INDICATED) (RECOMMENDED BY PARTITION MANUFACTURER). DRILL OR PUNCH BOTTOM FLANGES OF BEAMS TO RECEIVE PARTITION TRACK HANGER RODS; LOCATE HOLES WHERE INDICATED ON OPERABLE PARTITION SHOP DRAWINGS.

1.10 STEEL AND IRON FINISHES

A. SHOP PRIME IRON AND STEEL ITEMS NOT INDICATED TO BE GALVANIZED UNLESS THEY ARE TO BE EMBEDDED IN CONCRETE, SPRAYED-ON FIREPROOFING, OR MASONRY, OR UNLESS OTHERWISE INDICATED.
1. SHOP PRIME WITH UNIVERSAL SHOP PRIMER UNLESS ZINC-RICH PRIMER IS INDICATED.

1.11 INSTALLATION, GENERAL

A. CUTTING, FITTING, AND PLACEMENT: PERFORM CUTTING, DRILLING, AND FITTING REQUIRED FOR INSTALLING METAL FABRICATIONS. SET METAL FABRICATIONS ACCURATELY IN LOCATION, ALIGNMENT, AND ELEVATION; WITH EDGES AND SURFACES LEVEL, PLUMB, TRUE, AND FREE OF RACK; AND MEASURED FROM ESTABLISHED LINES AND LEVELS.
B. FIT EXPOSED CONNECTIONS ACCURATELY TOGETHER TO FORM HAIRLINE JOINTS. WELD CONNECTIONS THAT ARE NOT TO BE LEFT AS EXPOSED JOINTS BUT CANNOT BE SHOP WELDED BECAUSE OF SHIPPING SIZE LIMITATIONS, DO NOT WELD, CUT, OR ABRADE SURFACES OF EXTERIOR UNITS THAT HAVE BEEN HOT-DIP GALVANIZED AFTER FABRICATION AND ARE FOR BOLTED OR SCREWED FIELD CONNECTIONS.
C. FIELD WELDING: COMPLY WITH THE FOLLOWING REQUIREMENTS:
1. USE MATERIALS AND METHODS THAT MINIMIZE DISTORTION AND DEVELOP STRENGTH AND CORROSION RESISTANCE OF BASE METALS.
2. OBTAIN FUSION WITHOUT UNDERCUT OR OVERLAP.
3. REMOVE WELDING FLUX IMMEDIATELY.
4. AT EXPOSED CONNECTIONS, FINISH EXPOSED WELDS AND SURFACES SMOOTH AND BLENDED SO NO ROUGHNESS SHOWS AFTER FINISHING AND CONTOUR OF WELDED SURFACE MATCHES THAT OF ADJACENT SURFACE.
D. FASTENING TO IN-PLACE CONSTRUCTION: PROVIDE ANCHORAGE DEVICES AND FASTENERS WHERE METAL FABRICATIONS ARE REQUIRED TO BE FASTENED TO IN-PLACE CONSTRUCTION. PROVIDE THREADED FASTENERS FOR USE WITH CONCRETE AND MASONRY INSERTS, TOGGLE BOLTS, THROUGH BOLTS, LAG SCREWS, WOOD SCREWS, AND OTHER CONNECTORS.
E. PROVIDE TEMPORARY BRACING OR ANCHORS IN FORMWORK FOR ITEMS THAT ARE TO BE BUILT INTO CONCRETE, MASONRY, OR SIMILAR CONSTRUCTION.
F. CORROSION PROTECTION: COAT CONCEALED SURFACES OF ALUMINUM THAT WILL COME INTO CONTACT WITH GROUT, CONCRETE, MASONRY, WOOD, OR DISSIMILAR METALS WITH THE FOLLOWING:
1. CAST ALUMINUM: HEAVY COAT OF BITUMINOUS PAINT.
2. EXTRUDED ALUMINUM: TWO COATS OF CLEAR LACQUER.

05 50 00 - METAL FABRICATIONS (CONT.)

1.12 INSTALLING MISCELLANEOUS FRAMING AND SUPPORTS

A. GENERAL: INSTALL FRAMING AND SUPPORTS TO COMPLY WITH REQUIREMENTS OF ITEMS BEING SUPPORTED, INCLUDING MANUFACTURERS' WRITTEN INSTRUCTIONS AND REQUIREMENTS INDICATED ON SHOP DRAWINGS.
B. ANCHOR SUPPORTS FOR OPERABLE PARTITIONS SECURELY TO AND RIGIDLY BRACE FROM BUILDING STRUCTURE.

1.13 ADJUSTING AND CLEANING

A. TOUCH-UP PAINTING: IMMEDIATELY AFTER ERECTION, CLEAN FIELD WELDS, BOLTED CONNECTIONS, AND ABRADED AREAS. PAINT UNCOATED AND ABRADED AREAS WITH THE SAME MATERIAL AS USED FOR SHOP PAINTING TO COMPLY WITH SSPC-PA 1 FOR TOUCHING UP SHOP-PAINTED SURFACES.
1. APPLY BY BRUSH OR SPRAY TO PROVIDE A MINIMUM 2.0-MIL DRY FILM THICKNESS.
B. TOUCH-UP PAINTING: CLEANING AND TOUCH-UP PAINTING OF FIELD WELDS, BOLTED CONNECTIONS, AND ABRADED AREAS OF SHOP PAINT ARE SPECIFIED IN DIVISION 09 PAINTING SECTIONS.
C. GALVANIZED SURFACES: CLEAN FIELD WELDS, BOLTED CONNECTIONS, AND ABRADED AREAS AND REPAIR GALVANIZING TO COMPLY WITH ASTM A 780.

05 51 19 - METAL FLOOR PLATE STAIRS

1.1 SUMMARY

A. SECTION INCLUDES INDUSTRIAL-TYPE, STRAIGHT-RUN STAIRS WITH STEEL FLOOR PLATE TREADS AND RAILINGS ATTACHED TO METAL FLOOR PLATE STAIRS.

1.2 ACTION SUBMITTALS

A. PRODUCT DATA: FOR METAL FLOOR PLATE STAIRS.
B. SHOP DRAWINGS: INCLUDE PLANS, ELEVATIONS, SECTIONS, DETAILS, AND ATTACHMENTS TO OTHER WORK.
C. DELEGATED-DESIGN SUBMITTAL: PROVIDE DESIGN CALCULATIONS FOR STAIRS AND PLATFORMS, INCLUDING ANALYSIS DATA SIGNED AND SEALED BY THE QUALIFIED PROFESSIONAL ENGINEER RESPONSIBLE FOR THEIR PREPARATION.

1.3 PERFORMANCE REQUIREMENTS

A. DELEGATED-DESIGN ENGAGE A QUALIFIED PROFESSIONAL ENGINEER, REGISTERED BY THE STATE IN WHICH THE PROJECT IS BEING CONSTRUCTED TO DESIGN STAIRS.
B. STRUCTURAL PERFORMANCE OF STAIRS: METAL STAIRS SHALL WITHSTAND THE EFFECTS OF GRAVITY LOADS AND THE FOLLOWING LOADS AND STRESSES WITHIN LIMITS AND UNDER CONDITIONS INDICATED:
1. UNIFORM LOAD: 100 LBF/SQ. FT.
2. CONCENTRATED LOAD: 300 LBF APPLIED ON AN AREA OF 4 SQ. IN.
3. UNIFORM AND CONCENTRATED LOADS NEED NOT BE ASSUMED TO ACT CONCURRENTLY.
4. STAIR FRAMING: CAPABLE OF WITHSTANDING STRESSES RESULTING FROM RAILING LOADS IN ADDITION TO LOADS SPECIFIED ABOVE.
C. SEISMIC PERFORMANCE OF STAIRS: METAL STAIRS SHALL WITHSTAND THE EFFECTS OF EARTHQUAKE MOTIONS DETERMINED ACCORDING TO ASCE/SEI 7.
1. COMPONENT IMPORTANCE FACTOR: 1.5.

1.4 METALS

A. METAL SURFACES, GENERAL: PROVIDE MATERIALS WITH SMOOTH, FLAT SURFACES UNLESS OTHERWISE INDICATED. FOR COMPONENTS EXPOSED TO VIEW IN THE COMPLETED WORK, PROVIDE MATERIALS WITHOUT SEAM MARKS, ROLLER MARKS, ROLLED TRADE NAMES, OR BLEMISHES.
B. STEEL PLATES, SHAPES, AND BARS: ASTM A 36/A 36M.
C. ROLLED-STEEL FLOOR PLATE: ASTM A 786/A 786M, ROLLED FROM PLATE COMPLYING WITH ASTM A 36/A 36M OR ASTM A 283/A 283M, GRADE C OR D.

1.5 FASTENERS

A. PROVIDE ZINC-PLATED FASTENERS WITH COATING COMPLYING WITH ASTM B 633 OR ASTM F 1941, CLASS FE/ZN 12 FOR EXTERIOR USE AND CLASS FE/ZN 5 WHERE BUILT INTO EXTERIOR WALLS. SELECT FASTENERS FOR TYPE, GRADE, AND CLASS REQUIRED.

1.6 MISCELLANEOUS MATERIALS

A. UNIVERSAL SHOP PRIMER: FAST-CURING, LEAD- AND CHROMATE-FREE, UNIVERSAL MODIFIED-ALKYD PRIMER COMPLYING WITH MPI#79 AND COMPATIBLE WITH TOPCOAT.
B. GALVANIZING REPAIR PAINT: HIGH-ZINC-DUST-CONTENT PAINT COMPLYING WITH SSPC-PAINT 20 AND COMPATIBLE WITH PAINTS SPECIFIED TO BE USED OVER IT.

1.7 FABRICATION, GENERAL

A. PROVIDE COMPLETE STAIR ASSEMBLIES, INCLUDING METAL FRAMING, HANGERS, CLIPS, BRACKETS, BEARING PLATES, AND OTHER COMPONENTS NECESSARY TO SUPPORT AND ANCHOR STAIRS AND PLATFORMS ON SUPPORTING STRUCTURE.
1. JOIN COMPONENTS BY WELDING UNLESS OTHERWISE INDICATED.
2. USE CONNECTIONS THAT MAINTAIN STRUCTURAL VALUE OF JOINED PIECES.
3. FABRICATE TREADS AND PLATFORMS OF EXTERIOR STAIRS SO FINISHED WALKING SURFACES SLOPE TO DRAIN.
B. WELD CONNECTIONS TO COMPLY WITH THE FOLLOWING:
1. USE MATERIALS AND METHODS THAT MINIMIZE DISTORTION AND DEVELOP STRENGTH AND CORROSION RESISTANCE OF BASE METALS.
2. OBTAIN FUSION WITHOUT UNDERCUT OR OVERLAP.
3. REMOVE WELDING FLUX IMMEDIATELY.
4. WELD EXPOSED CORNERS AND SEAMS CONTINUOUSLY UNLESS OTHERWISE INDICATED.
5. AT EXPOSED CONNECTIONS, FINISH EXPOSED WELDS TO COMPLY WITH NOMMA'S "VOLUNTARY JOINT FINISH STANDARDS" FOR TYPE 4 WELDS: GOOD QUALITY, UNIFORM UNPRESSED WELD WITH MINIMAL SPATTER.
C. FABRICATE JOINTS THAT WILL BE EXPOSED TO WEATHER IN A MANNER TO EXCLUDE WATER. PROVIDE WEEP HOLES WHERE WATER MAY ACCUMULATE.

1.8 STEEL-FRAMED STAIRS

A. NAAMM STAIR STANDARD: COMPLY WITH "RECOMMENDED VOLUNTARY MINIMUM STANDARDS FOR FIXED METAL STAIRS" IN NAAMM AMP 510, "METAL STAIRS MANUAL," INDUSTRIAL CLASS, UNLESS MORE STRINGENT REQUIREMENTS ARE INDICATED.
B. STAIR FRAMING:
1. FABRICATE STRINGERS OF STEEL PLATES OR CHANNELS.
a. PROVIDE CLOSURES FOR EXPOSED ENDS OF CHANNEL STRINGERS.
2. CONSTRUCT PLATFORMS OF STEEL PLATE OR CHANNEL HEADERS AND MISCELLANEOUS FRAMING MEMBERS AS NEEDED TO COMPLY WITH PERFORMANCE REQUIREMENTS.
3. WELD IN SUB-LEVEL STRINGERS TO HEADERS; WELD OR BOLT FRAMING MEMBERS TO STRINGERS AND HEADERS.
C. METAL FLOOR PLATE STAIRS: FORM TREADS AND PLATFORMS TO CONFIGURATIONS SHOWN FROM ABRASIVE-SURFACE FLOOR PLATE OF THICKNESS NEEDED TO COMPLY WITH PERFORMANCE REQUIREMENTS, BUT NOT LESS THAN 1/4 INCH.

1.9 STAIR RAILINGS

A. COMPLY WITH APPLICABLE REQUIREMENTS IN SECTION 055213 "PIPE AND TUBE RAILINGS."
1. RAILS MAY BE BENT AT CORNERS, RAIL RETURNS, AND WALL RETURNS, INSTEAD OF USING PREFABRICATED FITTINGS.
2. CONNECT POSTS TO STAIR FRAMING BY DIRECT WELDING UNLESS OTHERWISE INDICATED.

1.10 FINISHES

A. FINISH METAL STAIRS AFTER ASSEMBLY.
B. GALVANIZING: HOT-DIP GALVANIZE ITEMS AS INDICATED TO COMPLY WITH ASTM A 153/A 153M FOR STEEL AND IRON HARDWARE AND WITH ASTM A 123/A 123M FOR OTHER STEEL AND IRON PRODUCTS.
C. PREPARATION FOR SHOP PRIMING: PREPARE UNCOATED FERROUS-METAL SURFACES TO COMPLY WITH SSPC-SP 6/NACE NO. 3, "COMMERCIAL BLAST CLEANING" AND SSPC-SP 3, "POWER TOOL CLEANING."
D. APPLY SHOP PRIMER TO PREPARED SURFACES OF METAL STAIR COMPONENTS, EXCEPT THOSE WITH GALVANIZED FINISHES AND THOSE TO BE E

CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCE

08 10 00 - ROUGH CARPENTRY - NON STRUCTURAL

1.1 GENERAL REQUIREMENTS

A. DIMENSION LUMBER: COMPLY WITH PS 20 AND REQUIREMENTS OF SPECIFIED GRADING AGENCIES.
1. IF NO SPECIES IS SPECIFIED, PROVIDE ANY SPECIES GRADED BY THE AGENCY SPECIFIED; IF NO GRADING AGENCY IS SPECIFIED, PROVIDE LUMBER GRADED BY ANY GRADING AGENCY MEETING THE SPECIFIED REQUIREMENTS.
2. GRADING AGENCY: ANY GRADING AGENCY WHOSE RULES ARE APPROVED BY THE BOARD OF REVIEW, AMERICAN LUMBER STANDARD COMMITTEE (WWW.ALSC.ORG) AND WHO PROVIDES GRADING SERVICE FOR THE SPECIES AND GRADE SPECIFIED; PROVIDE LUMBER STAMPED WITH GRADE MARK UNLESS OTHERWISE INDICATED.

1.2 DIMENSION LUMBER FOR CONCEALED APPLICATIONS

A. SIZES: NOMINAL SIZES AS INDICATED ON DRAWINGS, S4S.
B. MOISTURE CONTENT: S-DRY OR MC19.
C. MISCELLANEOUS FRAMING, BLOCKING, NAILERS, GROUNDS, AND FURRING:
1. LUMBER: S4S, NO. 2 OR STANDARD GRADE.
2. BOARDS: STANDARD OR NO. 3.

1.3 CONSTRUCTION PANELS

A. COMMUNICATIONS AND ELECTRICAL ROOM MOUNTING BOARDS: PS 1 A-D-CX-EXT PLYWOOD, 3/4 INCH THICK. PROVIDE FR (FIRE RETARDANT) TREATED MATERIAL WHERE REQUIRED BY CODE.

1.4 ACCESSORIES

A. A. FASTENERS AND ANCHORS:
1. METAL AND FINISH: HOT-DIPPED GALVANIZED STEEL PER ASTM A 153/A 153M FOR HIGH HUMIDITY AND PRESERVATIVE-TREATED WOOD LOCATIONS, UNFINISHED STEEL ELSEWHERE.
2. ANCHORS: TOGGLE BOLT TYPE FOR ANCHORAGE TO HOLLOW MASONRY.

1.5 FACTORY WOOD TREATMENT

A. TREATED LUMBER AND PLYWOOD: COMPLY WITH REQUIREMENTS OF AWPA U1 - USE CATEGORY SYSTEM FOR WOOD TREATMENTS DETERMINED BY USE CATEGORIES, EXPECTED SERVICE CONDITIONS, AND SPECIFIC APPLICATIONS.
1. FIRE-RETARDANT TREATED WOOD: MARK EACH PIECE OF WOOD WITH PRODUCER'S STAMP INDICATING COMPLIANCE WITH SPECIFIED REQUIREMENTS.
2. PRESERVATIVE-TREATED WOOD: PROVIDE LUMBER AND PLYWOOD MARKED OR STAMPED BY AN ALSC-ACCREDITED TESTING AGENCY, CERTIFYING LEVEL AND TYPE OF TREATMENT IN ACCORDANCE WITH AWPA STANDARDS.
B. PRESERVATIVE TREATMENT:
1. MANUFACTURERS:
a. ARCH WOOD PROTECTION, INC.; WWW.WOLMANIZEDWOOD.COM.
b. VIANCE, LLC; WWW.TREATEDWOOD.COM.
c. OSMOSE, INC.; WWW.OSMOSE.COM.
2. PRESERVATIVE PRESSURE TREATMENT OF LUMBER ABOVE GRADE: AWPA U1, USE CATEGORY UC3B, COMMODITY SPECIFICATION A USING WATERBORNE PRESERVATIVE TO 0.25 LB/CU FT RETENTION.
a. KILN DRY LUMBER AFTER TREATMENT TO MAXIMUM MOISTURE CONTENT OF 19 PERCENT.
b. TREAT LUMBER IN CONTACT WITH FLASHING, OR WATERPROOFING.
c. TREAT LUMBER IN CONTACT WITH MASONRY OR CONCRETE.
d. TREAT LUMBER IN OTHER LOCATIONS AS INDICATED.

1.6 PREPARATION

A. WHERE WOOD FRAMING BEARS ON CEMENTITIOUS FOUNDATIONS, INSTALL FULL WIDTH SILL FLASHING CONTINUOUS OVER TOP OF FOUNDATION, LAP ENDS OF FLASHING MINIMUM OF 4 INCHES AND SEAL.
B. COORDINATE INSTALLATION OF ROUGH CARPENTRY MEMBERS SPECIFIED IN OTHER SECTIONS.

1.7 INSTALLATION - GENERAL

A. SELECT MATERIAL SIZES TO MINIMIZE WASTE.
B. REUSE SCRAP TO THE GREATEST EXTENT POSSIBLE; CLEARLY SEPARATE SCRAP FOR USE ON SITE AS ACCESSORY COMPONENTS, INCLUDING: SHIMS, BRACING, AND BLOCKING.
C. WHERE TREATED WOOD IS USED ON INTERIOR, PROVIDE TEMPORARY VENTILATION DURING AND IMMEDIATELY AFTER INSTALLATION SUFFICIENT TO REMOVE INDOOR AIR CONTAMINANTS.

1.8 BLOCKING, NAILERS, AND SUPPORTS

A. PROVIDE FRAMING AND BLOCKING MEMBERS AS INDICATED OR AS REQUIRED TO SUPPORT FINISHES, FIXTURES, SPECIALTY ITEMS, AND TRIM.
B. IN METAL STUD WALLS, PROVIDE CONTINUOUS BLOCKING AROUND DOOR AND WINDOW OPENINGS FOR ANCHORAGE OF FRAMES. SECURELY ATTACHED TO STUD FRAMING.
C. IN WALLS, PROVIDE BLOCKING ATTACHED TO STUDS AS BACKING AND SUPPORT FOR WALL-MOUNTED ITEMS, UNLESS ITEM CAN BE SECURELY FASTENED TO TWO OR MORE STUDS OR OTHER METHOD OF SUPPORT IS EXPLICITLY INDICATED.
D. WHERE CEILING-MOUNTING IS INDICATED, PROVIDE BLOCKING AND SUPPLEMENTARY SUPPORTS ABOVE CEILING, UNLESS OTHER METHOD OF SUPPORT IS EXPLICITLY INDICATED.

1.9 INSTALLATION OF CONSTRUCTION PANELS

A. PLYWOOD WALL SHEATHING
1. INSTALL WITH LONG EDGE PERPENDICULAR TO FRAMING.
2. ALLOW 1/8 INCH OPEN SPACE BETWEEN PANEL ENDS AND EDGES FOR EXPANSION AND CONTRACTION.
3. PLACE ENDS OVER FRAMING MEMBERS. INSTALL OVER TWO OR MORE SPANS WITH END JOINTS STAGGERED AND FACE GRAIN PERPENDICULAR TO SUPPORTS.
4. SECURE WITH GALVANIZED NAILS TO EACH SUPPORT SPACING FASTENERS AT 12 INCH O.C. FOR INTERMEDIATE SUPPORTS AND 6 INCH O.C. FOR ENDS SUPPORTS (OR AT SPACING AS OTHERWISE INDICATED ON STRUCTURAL DRAWINGS), USING 40 RING SHANK NAILS. STAPLES WILL BE ALLOWED AS A SUBSTITUTION IF ALLOWED BY GOVERNING CODES, ARCHITECT, AND OWNER.
5. USE EDGE CLIPS AT ALL UNSUPPORTED EDGES AT ROOF SHEATHING, SPACED AT 12" MAXIMUM ON CENTER.
B. COMMUNICATIONS AND ELECTRICAL ROOM MOUNTING BOARDS: SECURE WITH SCREWS TO STUDS WITH EDGES OVER FIRM BEARING; SPACE FASTENERS AT MAXIMUM 24 INCHES ON CENTER ON ALL EDGES AND INTO STUDS IN FIELD OF BOARD.

1.10 TOLERANCES

A. FRAMING MEMBERS: 1/4 INCH FROM TRUE POSITION, MAXIMUM.
B. VARIATION FROM PLANE: 1/4 INCH IN 10 FEET MAXIMUM, AND 1/4 INCH IN 30 FEET MAXIMUM.

09 16 00 - SHEATHING

1.1 WALL SHEATHING

A. GLASS-MAT GYPSUM WALL SHEATHING: ASTM C 1177.
1. PRODUCTS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE ONE OF THE FOLLOWING:
a. CERTAINTEED CORPORATION; GLASSROC.
b. G-P GYPSUM CORPORATION; DENS-GLASS GOLD.
c. EMPIRE/HILAND INC.; GREENGLASS
d. UNITED STATES GYPSUM CO.; SECURODEX.
2. TYPE AND THICKNESS: TYPE X, 5/8 INCH THICK.
3. SIZE: 48 BY 109 INCHES.

1.2 GYPSUM SHEATHING INSTALLATION

A. A. COMPLY WITH GA-253 AND WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
1. FASTEN GYPSUM SHEATHING TO COLD-FORMED METAL FRAMING WITH SCREWS.
2. INSTALL BOARDS WITH A 3/8-INCH GAP WHERE NON-LOAD-BEARING CONSTRUCTION ABUTS STRUCTURAL ELEMENTS.
3. INSTALL BOARDS WITH A 1/4-INCH GAP WHERE THEY ABUT MASONRY OR SIMILAR MATERIALS THAT MIGHT RETAIN MOISTURE, TO PREVENT WICKING.
B. APPLY FASTENERS SO HEADS BEAR TIGHTLY AGAINST FACE OF SHEATHING, BUT DO NOT CUT INTO FACING.
C. VERTICAL INSTALLATION: INSTALL BOARD VERTICAL EDGES CENTERED OVER STUDS, ABUT ENDS AND EDGES OF EACH BOARD WITH THOSE OF ADJACENT BOARDS, ATTACH BOARDS AT PERIMETER AND WITHIN FIELD OF BOARD TO EACH STUD.
D. SPACE FASTENERS APPROXIMATELY 8 INCHES O.C. AND SET BACK A MINIMUM OF 3/8 INCH (FROM EDGES AND ENDS OF BOARDS.

07 21 00 - INSULATION

1.1 GENERAL

A. SUBSTITUTIONS: SEE SECTION 016000 - PRODUCT REQUIREMENTS.

1.2 APPLICATIONS

A. INSULATION OVER METAL STUD FRAMED WALLS, CONTINUOUS: POLYISOCYANURATE BOARD.
B. INSULATION IN METAL STUD FRAMED WALLS: BATT INSULATION SEPARATING CONDITIONED FROM NON-CONDITIONED AREAS AND FOR ACOUSTICAL PURPOSES AROUND RESTROOMS.
C. AIR BARRIER JOINT FILLER: SINGLE- AND MULTI-COMPONENT EXPANDING POLYURETHANE FOAM SEALANT
D. SLAB-EDGE PERIMETER INSULATION: EXTRUDED POLYSTYRENE BOARD INSULATION

1.3 POLYISOCYANURATE BOARD

A. POLYISOCYANURATE BOARD INSULATION: RIGID CELLULAR FOAM, COMPLYING WITH ASTM C1289, TYPE II, CLASS 1, FOIL-FACED AS INDICATED ON PROJECT DRAWINGS; GRADE 1.

1.4 FIBERGLASS BATT INSULATION

A. GLASS FIBER BATT INSULATION: FLEXIBLE PREFORMED BATT OR BLANKET, COMPLYING WITH ASTM C665; FRICTION FIT.
1. FLAME SPREAD INDEX: 25 OR LESS, WHEN TESTED IN ACCORDANCE WITH ASTM E84.
2. SMOKE DEVELOPED INDEX: 450 OR LESS, WHEN TESTED IN ACCORDANCE WITH ASTM E84.
3. COMBUSTIBILITY: NON-COMBUSTIBLE, WHEN TESTED IN ACCORDANCE WITH ASTM E13 , EXCEPT FOR FACING, IF ANY.
4. FORMALDEHYDE CONTENT: ZERO.
5. THERMAL RESISTANCE: AS INDICATED ON DRAWINGS.
6. FACING: UNFACED (TYPICAL
7. MANUFACTURERS:
a. CERTAINTEED CORPORATION: WWW.ICONTAINTEED.COM.
b. JOHNS MANVILLE CORPORATION: WWW.JM.COM.
c. KNAUF INSULATION GMBH: WWW.KNAUFINSULATION.US
d. OWENS CORNING CORP: WWW.OWENSCORNING.COM.

1.5 EXPANDING POLYURETHANE FOAM SEALANT

A. EXPANDING SINGLE-COMPONENT OR MULTI-COMPONENT MOISTURE-CURED POLYURETHANE FOAM WITH A (H) CFC-FREE PROPELLANT.
1. EXPANDS TO THREE TIMES VOLUME (MIN) AT POINT OF APPLICATION
2. THERMAL INSULATION: R-6 (MIN). AT 2" THICKNESS
3. MANUFACTURER: SUBJECT TO COMPLIANCE WITH PROJECT REQUIREMENTS,
a. GEOCEL
b. DOW CHEMICAL: STRAW TRIPLE EXPANDING FOAM
c. HANDI-FOAM MULTIPURPOSE INSULATING SPRAY FOAM SEALANT
d. OR EQUAL

07 21 00 - INSULATION (CONT)

1.6 EXTRUDED POLYSTYRENE BOARD

A. EXTRUDED POLYSTYRENE BOARD INSULATION: ASTM C 578, OF TYPE AND MINIMUM COMPRESSIVE STRENGTH INDICATED BELOW, WITH MAXIMUM FLAME-SPREAD AND SMOKE-DEVELOPED INDEXES OF 75 AND 450, RESPECTIVELY, PER ASTM E 84.
1. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:
a. DIVERSIFOAM PRODUCTS,
b. DOW CHEMICAL COMPANY,
c. OWENS CORNING
d. PACTIV BUILDING PRODUCTS
2. TYPE VI, 40 PSI, (HEDGEHOG GUS ON GRADE AND BACK SIDE OF FOUNDATION WALLS)
B. ADHESIVE FOR BONDING INSULATION: PRODUCT WITH DEMONSTRATED CAPABILITY TO BOND INSULATION SECURELY TO SUBSTRATES WITHOUT DAMAGING INSULATION AND SUBSTRATES.

1.7 EXAMINATION

A. VERIFY THAT SUBSTRATE, ADJACENT MATERIALS, AND INSULATION MATERIALS ARE DRY AND THAT SUBSTRATES ARE READY TO RECEIVE INSULATION AND ADHESIVE.
B. VERIFY SUBSTRATE SURFACES ARE FLAT, FREE OF HONEYCOMB, FINS, IRREGULARITIES, OR MATERIALS OR SUBSTANCES THAT MAY IMPEDE ADHESIVE BOND.

1.8 BATT INSTALLATION

A. INSTALL INSULATION AND VAPOR RETARDER IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
B. INSTALL IN EXTERIOR WALL, FLOOR AND ROOF SPACES WITHOUT GAPS OR VOIDS. DO NOT COMPRESS INSULATION.
C. TRIM INSULATION NEATLY TO FIT SPACES. INSULATE MISCELLANEOUS GAPS AND VOIDS.
D. FIT INSULATION TIGHTLY IN CAVITIES AND TIGHTLY TO EXTERIOR SIDE OF MECHANICAL AND ELECTRICAL SERVICES WITHIN THE PLANE OF THE INSULATION.
E. PLACE INSULATION AGAINST BAFFLES. DO NOT IMPEDE NATURAL ATTIC VENTILATION TO SOFFIT.
F. COORDINATE WORK OF THIS SECTION WITH CONSTRUCTION OF AIR BARRIER SEAL SPECIFIED IN SECTION 072500.

1.9 PROTECTION

A. DO NOT PERMIT INSTALLED INSULATION TO BE WET OR DAMAGED PRIOR TO ITS CONCEALMENT.

07 25 00 - WEATHER BARRIERS - SHEET

1.1 SUBMITTALS

A. PRODUCT DATA: PROVIDE DATA ON MATERIAL CHARACTERISTICS.
B. MANUFACTURER'S INSTALLATION INSTRUCTIONS: INDICATE PREPARATION.

1.2 FIELD CONDITIONS

A. MAINTAIN TEMPERATURE AND HUMIDITY RECOMMENDED BY THE MATERIALS MANUFACTURERS BEFORE, DURING AND AFTER INSTALLATION.

1.3 WARRANTY

A. PROVIDE MANUFACTURER'S STANDARD 10 YEAR WATER-TIGHTNESS WARRANTY COVERING MATERIAL AND INSTALLATION.

1.4 WATER RESISTIVE BARRIER

A. A. AIR BARRIER SHEET, MECHANICALLY FASTENED:
1. AIR PENETRATION: 0.001 CFM/FT2 AT 75 PA, WHEN TESTED IN ACCORDANCE WITH ASTM E2178. TYPE I PER ASTM E1677, 42.06 CFM/FT2 AT 75 PA, WHEN TESTED IN ACCORDANCE WITH ASTM E2357,
2. WATER VAPOR TRANSMISSION: 28 PERMS, WHEN TESTED IN ACCORDANCE WITH ASTM E96, METHOD B,
3. WATER PENETRATION RESISTANCE: MINIMUM 250 CM WHEN TESTED IN ACCORDANCE WITH AATCC TEST METHOD 127,
4. BASIS WEIGHT: MINIMUM 2.7 OZ/YD2, WHEN TESTED IN ACCORDANCE WITH TAPPI TEST METHOD T-410.
B. AIR RESISTANCE: AIR INFILTRATION AT > 1500 SECONDS, WHEN TESTED IN ACCORDANCE WITH TAPPI TEST METHOD T-460.
1. TENSILE STRENGTH: MINIMUM 24/35 LBS/IN., WHEN TESTED IN ACCORDANCE WITH ASTM D882, METHOD A,
2. TEAR RESISTANCE: 1250 LBS., WHEN TESTED IN ACCORDANCE WITH ASTM D1117,
3. SURFACE BURNING CHARACTERISTICS: CLASS A, WHEN TESTED IN ACCORDANCE WITH ASTM E84, FLAME SPREAD: 10, SMOKE DEVELOPED: 10,
4. MANUFACTURERS:
a. DUPONT TYVEK; WWW.DUPONT.COM.
b. PACTIV CORPORATION; GREENGUARD.PACTIV.COM.
c. VAPROSHIELD, LLC; WWW.VAPROSHIELD.COM.
5. ACCEPTABLE PRODUCTS:
a. BEHIND MASONRY VENEER:
1. TYVEK COMMERCIAL WRAP, BY E.I. DUPONT.
b. SELF-ADHERING FLEXIBLE FLASHING TAPE, DUPONT™ FLEXWRAP™, AND SELF ADHERING STRAIGHT FLASHING TAPE, DUPONT™ STRAIGHTFLASH ™,

1.5 SEALANTS

A. SILICONE SEALANT: TYPE S-GP AS SPECIFIED IN SECTION 079005.

1.6 ACCESSORIES

A. SELF-ADHESIVE SHEET FLASHING: ASTM D 1970.
B. THINNERS AND CLEANERS: AS RECOMMENDED BY MATERIAL MANUFACTURER.
C. ATTACHMENT DEVICES: GALVANIZED STEEL NAILS WITH WEATHER RESISTANT PLASTIC CAPS.

1.7 EXAMINATION

A. VERIFY THAT SURFACES AND CONDITIONS ARE READY TO ACCEPT THE WORK OF THIS SECTION.

1.8 PREPARATION

A. REMOVE PROJECTIONS, PROTRUDING FASTENERS, AND LOOSE OR FOREIGN MATTER THAT MIGHT INTERFERE WITH PROPER INSTALLATION.

1.9 INSTALLATION

A. INSTALL MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
B. WATER-RESISTIVE/AIR BARRIERS: INSTALL CONTINUOUS BARRIER OVER SURFACES INDICATED, WITH SHEETS LAPPED TO SHED WATER BUT WITH SEAMS NOT SEALED.
C. MECHANICALLY FASTENED SHEETS - ON EXTERIOR:
1. INSTALL SHEETS SHINGLE FASHION TO SHED WATER, WITH SEAMS GENERALLY HORIZONTAL.
2. OVERLAP SEAMS AS RECOMMENDED BY MANUFACTURER BUT AT LEAST 6 INCHES.
3. DISPLAY AT OUTSIDE AND INSIDE CORNERS AS RECOMMENDED BY MANUFACTURER BUT AT LEAST 12 INCHES.
4. ATTACH TO FRAMED CONSTRUCTION WITH FASTENERS EXTENDING THROUGH SHEATHING INTO FRAMING. SPACE FASTENERS AT 12 TO 16 INCHES ON CENTER ALONG EACH FRAMING MEMBER SUPPORTING SHEATHING.
5. FOR APPLICATIONS SPECIFIED TO BE AIR-TIGHT, SEAL SEAMS, LAPS, PENETRATIONS, TEARS, AND CUTS WITH SELF-ADHESIVE TAPE; USE ONLY LARGE-HEADED, GASKETED FASTENERS RECOMMENDED BY THE MANUFACTURER.
6. INSTALL AIR BARRIER UNDER JAMB FLASHINGS.
7. INSTALL HEAD FLASHINGS UNDER WEATHER BARRIER.
8. AT OPENINGS TO BE FILLED WITH FRAMES HAVING NAILING FLANGES, WRAP EXCESS SHEET INTO OPENING AT HEAD, SEAL SHEET OVER FLANGE AND FLASHING.
D. OPENINGS AND PENETRATIONS IN EXTERIOR WEATHER BARRIERS:
1. INSTALL SELF-ADHESIVE FLASHING OVER SILLS, COVERING ENTIRE SILL FRAME MEMBER, EXTENDING AT LEAST 6 INCHES ONTO WEATHER BARRIER AND AT LEAST 8 INCHES UP JAMBS; MECHANICALLY FASTEN STRETCHED EDGES.
2. AT OPENINGS TO BE FILLED WITH FRAMES HAVING NAILING FLANGES, SEAL HEAD AND JAMB FLANGES USING A CONTINUOUS BEAD OF SEALANT COMPRESSED BY FLANGE AND COVER FLANGES WITH SELF-ADHESIVE FLASHING AT LEAST 4 INCHES WIDE; DO NOT SEAL SILL FLANGE.
3. AT OPENINGS TO BE FILLED WITH NON-FLANGED FRAMES, SEAL WEATHER BARRIER TO ALL SIDES OF OPENING FRAMING, USING SELF-ADHESIVE FLASHING AT LEAST 9 INCHES WIDE, COVERING ENTIRE DEPTH OF FRAMING, AT HEAD OF OPENINGS, INSTALL SELF-ADHESIVE FLASHING UNDER WEATHER BARRIER EXTENDING AT LEAST 2 INCHES BEYOND FACE OF JAMBS; SEAL WEATHER BARRIER TO FLASHING.
4. AT INTERIOR FACE OF OPENINGS, SEAL GAP BETWEEN WINDOW/DOOR FRAME AND ROUGH FRAMING, USING JOINT SEALANT OVER BACKER ROD.
5. SERVICE AND OTHER PENETRATIONS: FORM SELF-ADHESIVE FLASHING AROUND PENETRATING ITEM AND SEAL TO WEATHER BARRIER SURFACE.

1.10 FIELD QUALITY CONTROL

A. DO NOT COVER INSTALLED WEATHER BARRIERS UNTIL REQUIRED INSPECTIONS HAVE BEEN COMPLETED.
B. OBTAIN APPROVAL OF INSTALLATION PROCEDURES BY THE WEATHER BARRIER MANUFACTURER BASED ON A MOCK-UP INSTALLED IN PLACE, PRIOR TO PROCEEDING WITH REMAINDER OF INSTALLATION.
C. PROVIDE INSPECTIONS AS REQUIRED BY WEATHER BARRIER MANUFACTURER AS REQUIRED TO SECURE WARRANTY INDICATED.

1.11 PROTECTION

A. DO NOT LEAVE MATERIALS EXPOSED TO WEATHER LONGER THAN RECOMMENDED BY MANUFACTURER.

07 26 00 - UNDER SLAB VAPOR BARRIER

1.1 PROJECT CONDITIONS

A. CLOSE AREAS TO TRAFFIC DURING APPLICATION AND FOR TIME PERIOD AFTER APPLICATION RECOMMENDED IN WRITING BY MANUFACTURER.

1.2 COORDINATION

A. COORDINATE PLACEMENT OF SHEET VAPOR BARRIER WITH DIVISION 03 SECTIONS.

1.3 MATERIALS

A. SHEET VAPOR BARRIER:
1. TYPE: 15 MIL POLYOLEFIN FILM MEETING REQUIREMENTS OF ASTM E 1745, CLASS A.
2. WATER VAPOR TRANSMITTANCE: (AFTER MANDATORY CONDITION PER ASTM E154 SECTIONS 8.11, 12, 13): MAXIMUM PERM RATING OF 0.01 AS TESTED IN ACCORDANCE WITH ASTM E 1745 SECTION 7.
3. STRENGTH: ASTM E 1745: CLASS A.

07 26 00 - UNDER SLAB VAPOR BARRIER (CONT)

B. ACCEPTABLE PRODUCTS:
1. 1. SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE ONE OF THE FOLLOWING:
a. STEGO WRAP VAPOR BARRIER BY STEGO INDUSTRIES, LLC, 15 MILS.
b. ZERO-PERM VAPOR BARRIER BY ALUMASEAL.
c. PERMINATOR BY W.R. MEADOWS.
d. XTREME BY TEX-TRUDE
C. ACCESSORIES:
1. BONDING AGENT: MANUFACTURERS APPROVED OR RECOMMENDED VAPOR BARRIER BONDING AGENT.
2. SEALING AND SEAMING TAPE: HIGH DENSITY POLYETHYLENE TAPE A MINIMUM OF 4 INCHES IN WIDTH, COMPATIBLE WITH VAPOR BARRIER MEMBRANE, AND MANUFACTURED BY OR RECOMMENDED BY VAPOR BARRIER MEMBRANE MANUFACTURER, TAPE FOR JOINTS SHALL HAVE AT LEAST THE SAME PERMEABILITY RATING AS THE VAPOR BARRIER SPECIFIED.
3. VAPOR PROOFING MASTIC: MANUFACTURER'S APPROVED OR RECOMMENDED VAPOR PROOFING MASTIC WITH THE SAME PERMEABILITY RATING AS THE VAPOR BARRIER SPECIFIED.
4. PIPE BOOT: CONSTRUCT PIPE BOOTS FROM VAPOR BARRIER MATERIAL AND PRESSURE SENSITIVE TAPE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

1.4 INSTALLATION

A. A. VAPOR BARRIER:
1. PLACE, PROTECT, AND REPAIR VAPOR BARRIER SHEETS ACCORDING TO ASTM E 1643 AND MANUFACTURER'S WRITTEN INSTRUCTIONS.
2. UNROLL VAPOR BARRIER WITH THE LONGEST DIMENSION PARALLEL WITH THE DIRECTION OF THE CONCRETE POUR.
3. INSTALL VAPOR BARRIER WITHOUT TEARS, VOIDS, AND HOLES. LAP ENDS AND EDGES AS RECOMMENDED BY MANUFACTURER, BUT NOT LESS THAN 6 INCHES OVER ADJACENT SHEETS. SEAL LAPS WITH TAPE.
4. TURN UP SHEETS AT PERIMETER, AT FOOTINGS AND VERTICAL WALLS, AND AGAINST PENETRATIONS, AND SEAL JOINTS WITH TAPE.
5. SEAL JOINTS, TEARS, HOLES, PERIMETER, AND PENETRATIONS THROUGH VAPOR WITH TAPE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
6. POINT EXPOSED EDGES WITH POINTING MASTIC TO PREVENT WATER FROM TRAVELING UNDER MEMBRANE.
7. ADHERE MEMBRANE TO VERTICAL SURFACES WITH ADHESIVE.

07 42 13 - METAL COMPOSITE MATERIAL WALL PANELS

1.1 SUMMARY

A. SECTION INCLUDES METAL COMPOSITE MATERIAL WALL PANELS.

1.2 PREINSTALLATION MEETINGS

A. PREINSTALLATION CONFERENCE: CONDUCT CONFERENCE AT PROJECT SITE.

1.3 ACTION SUBMITTALS

A. PRODUCT DATA: FOR EACH TYPE OF PRODUCT.
B. SHOP DRAWINGS: INCLUDE FABRICATION AND INSTALLATION LAYOUTS OF METAL COMPOSITE MATERIAL PANELS; DETAILS OF EDGE CONDITIONS, JOINTS, PANEL PROFILES, CORNERS, ANCHORAGES, ATTACHMENT ASSEMBLY, TRIM, FLASHINGS, CLOSURES, AND ACCESSORIES; AND SPECIAL DETAILS.
C. SAMPLES: FOR EACH TYPE OF METAL COMPOSITE MATERIAL PANEL INDICATED.

1.4 INFORMATIONAL SUBMITTALS

A. PRODUCT TEST REPORTS:
B. WARRANTIES: SAMPLES OF SPECIAL WARRANTIES.

1.5 CLOSEOUT SUBMITTALS

A. MAINTENANCE DATA.

1.6 QUALITY ASSURANCE

A. INSTALLER QUALIFICATIONS: AN ENTITY THAT EMPLOYS INSTALLERS AND SUPERVISORS WHO ARE TRAINED AND APPROVED BY MANUFACTURER.

1.7 WARRANTY

A. SPECIAL WARRANTY: MANUFACTURER'S STANDARD FORM IN WHICH MANUFACTURER AGREES TO REPAIR OR REPLACE COMPONENTS OF METAL COMPOSITE MATERIAL PANEL SYSTEMS THAT FAIL IN MATERIALS OR WORKMANSHIP WITHIN SPECIFIED WARRANTY PERIOD.
1. WARRANTY PERIOD: TWO YEARS FROM DATE OF SUBSTANTIAL COMPLETION.
B. SPECIAL WARRANTY ON PANEL FINISHES: MANUFACTURER'S STANDARD FORM IN WHICH MANUFACTURER AGREES TO REPAIR FINISH OR REPLACE METAL COMPOSITE MATERIAL PANELS THAT SHOW EVIDENCE OF DETERIORATION OF FACTORY-APPLIED FINISHES WITHIN SPECIFIED WARRANTY PERIOD.
1. FINISH WARRANTY PERIOD: 20 YEARS FROM DATE OF SUBSTANTIAL COMPLETION.

1.8 PERFORMANCE REQUIREMENTS

A. STRUCTURAL PERFORMANCE: PROVIDE METAL COMPOSITE MATERIAL PANEL SYSTEMS CAPABLE OF WITHSTANDING THE EFFECTS OF THE FOLLOWING LOADS, BASED ON TESTING ACCORDING TO ASTM E 330:
1. WIND LOADS: AS INDICATED ON DRAWINGS.
2. OTHER DESIGN LOADS: AS INDICATED ON DRAWINGS.
3. DEFLECTION LIMITS: FOR WIND LOADS, NO GREATER THAN 1/240 OF THE SPAN.
B. AIR INFILTRATION: AIR LEAKAGE OF NOT MORE THAN 0.06 CFM/SQ. FT. WHEN TESTED ACCORDING TO ASTM E 283 AT THE FOLLOWING TEST-PRESSURE DIFFERENCE:
1. TEST-PRESSURE DIFFERENCE: 6.24 LBF/SQ.FT.
C. WATER PENETRATION UNDER STATIC PRESSURE: NO WATER PENETRATION WHEN TESTED ACCORDING TO ASTM E 331 AT THE FOLLOWING TEST-PRESSURE DIFFERENCE:
1. TEST-PRESSURE DIFFERENCE: 6.24 LBF/SQ.FT.
D. THERMAL MOVEMENTS: ALLOW FOR THERMAL MOVEMENTS FROM AMBIENT AND SURFACE TEMPERATURE CHANGES BY PREVENTING BUCKLING, OPENING OF JOINTS, OVERSTRESSING OF COMPONENTS, FAILURE OF JOINT SEALANTS, FAILURE OF CONNECTIONS, AND OTHER DETRIMENTAL EFFECTS. BASE CALCULATIONS ON SURFACE TEMPERATURES OF MATERIALS DUE TO BOTH SOLAR HEAT GAIN AND NIGHTTIME-SKY HEAT LOSS.
1. TEMPERATURE CHANGE (RANGE): 120 DEG F; AMBIENT; 180 DEG F, MATERIAL SURFACES.
E. FIRE-RESISTANCE RATINGS: COMPLY WITH ASTM E 119; TESTING BY A QUALIFIED TESTING AGENCY. IDENTIFY PRODUCTS WITH APPROPRIATE MARKINGS OF APPLICABLE TESTING AGENCY.
1. INDICATE DESIGN DESIGNATIONS FROM UL'S "FIRE RESISTANCE DIRECTORY" OR FROM THE LISTINGS OF ANOTHER QUALIFIED TESTING AGENCY.
F. FIRE PROPAGATION CHARACTERISTICS: METAL COMPOSITE MATERIAL WALL PANEL SYSTEM PASSES NFPA 285 TESTING.

1.9 METAL COMPOSITE MATERIAL WALL PANELS

A. METAL COMPOSITE MATERIAL WALL PANEL SYSTEMS: PROVIDE FACTORY-FORMED AND -ASSEMBLED, METAL COMPOSITE MATERIAL WALL PANELS FABRICATED FROM TWO METAL FACINGS THAT ARE BONDED TO A SOLID, EXTRUDED THERMOPLASTIC CORE; FORMED TO PROFILE FOR INSTALLATION METHOD INDICATED; INCLUDE ATTACHMENT ASSEMBLIES COMPONENTS, PANEL STIFFENERS, AND ACCESSORIES REQUIRED FOR WEATHERTIGHT SYSTEM.
B. ALUMINUM-FACED COMPOSITE WALL PANELS: FORMED WITH 0.020-INCH- THICK, COIL-COATED ALUMINUM SHEET FACINGS.
1. PANEL THICKNESS: 4mm (NOMINAL), OR AS REQUIRED BY DESIGN CRITERIA OR AS INDICATED ON DRAWINGS.
2. CORE: STANDARD, EXCEPT WHERE FIRE-RETARDANT IS INDICATED ON DRAWINGS OR REQUIRED BY BUILDING CODE.
3. EXTERIOR FINISH: THREE-COAT FLUOROPOLYMER.
a. COLOR: AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE.
C. ATTACHMENT ASSEMBLY COMPONENTS: FORMED FROM EXTRUDED ALUMINUM.
D. ATTACHMENT ASSEMBLY: MANUFACTURER'S STANDARD.

1.10 MISCELLANEOUS MATERIALS

A. MISCELLANEOUS METAL SUBFRAMING AND FURRING: ASTM C 645, COLD-FORMED, METALLIC-COATED STEEL SHEET ASTM A 653/A 653M, G90 COATING DESIGNATION OR ASTM A 792/A 792M, CLASS AZ50 ALUMINUM-ZINC ALLOY COATING DESIGNATION UNLESS OTHERWISE INDICATED. PROVIDE MANUFACTURER'S STANDARD SECTIONS AS REQUIRED FOR SUPPORT AND ALIGNMENT OF METAL COMPOSITE MATERIAL PANEL SYSTEM.
B. PANEL ACCESSORIES: PROVIDE COMPONENTS REQUIRED FOR A COMPLETE, WEATHERTIGHT PANEL SYSTEM INCLUDING TRIM, COPINGS, FACIAS, MULLIONS, SILLS, CORNER UNITS, CLIPS, FLASHINGS, SEALANTS, GASKETS, FILLERS, CLOSURE STRIPS, AND SIMILAR ITEMS. MATCH MATERIAL AND FINISH OF METAL COMPOSITE MATERIAL PANELS UNLESS OTHERWISE INDICATED.
C. FLASHING AND TRIM: PROVIDE FLASHING AND TRIM FORMED FROM SAME MATERIAL AS METAL COMPOSITE MATERIAL PANELS AS REQUIRED TO SEAL AGAINST WEATHER AND TO PROVIDE FINISHED APPEARANCE. LOCATIONS INCLUDE, BUT ARE NOT LIMITED TO, BASES, DRIPS, SILLS, JAMBS, CORNERS, ENDWALLS, FRAMED OPENINGS, RAKES, FASCIAE, PARAPET CAPS, SOFFITS, REVEALS, AND FILLERS. FINISH FLASHING AND TRIM WITH SAME FINISH SYSTEM AS ADJACENT METAL COMPOSITE MATERIAL PANELS.
D. PANEL FASTENERS: SELF-TAPPING SCREWS DESIGNED TO WITHSTAND DESIGN LOADS. PROVIDE EXPOSED FASTENERS WITH HEADS MATCHING COLOR OF METAL COMPOSITE MATERIAL PANELS BY MEANS OF PLASTIC CAPS OR FACTORY-APPLIED COATING. PROVIDE EPDM OR PVC SEALING WASHERS FOR EXPOSED FASTENERS.
E. PANEL SEALANTS: ASTM C 920, AS RECOMMENDED IN WRITING BY METAL COMPOSITE MATERIAL PANEL MANUFACTURER, PROVIDE SEALANT TYPES RECOMMENDED BY MANUFACTURER THAT ARE COMPATIBLE WITH PANEL MATERIALS, ARE NONSTAINING, AND DO NOT DAMAGE PANEL FINISH.

1.11 FABRICATION

A. GENERAL: FABRICATE AND FINISH METAL COMPOSITE MATERIAL PANELS AND ACCESSORIES AT THE FACTORY, BY MANUFACTURER'S STANDARD PROCEDURES AND PROCESSES, AS NECESSARY TO FULFILL INDICATED PERFORMANCE REQUIREMENTS DEMONSTRATED BY LAB

CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCE

07 42 13 - METAL COMPOSITE MATERIAL WALL PANELS (CONT)

1.14 METAL COMPOSITE MATERIAL PANEL INSTALLATION

A. ATTACHMENT ASSEMBLY, GENERAL: INSTALL ATTACHMENT ASSEMBLY REQUIRED TO SUPPORT METAL COMPOSITE MATERIAL WALL PANELS AND TO PROVIDE A COMPLETE WEATHERTIGHT WALL SYSTEM, INCLUDING SUBGRIRTS, PERIMETER EXTRUSIONS, TRACKS, DRAINAGE CHANNELS, PANEL CLIPS, AND ANCHOR CHANNELS.
1. INCLUDE ATTACHMENT TO SUPPORTS, PANEL-TO-PANEL JOINERY, PANEL-TO-DISSIMILAR MATERIAL JOINERY, AND PANEL-SYSTEM JOINT SEALS.
B. INSTALLATION: ATTACH METAL COMPOSITE MATERIAL WALL PANELS TO SUPPORTS AT LOCATIONS, SPACINGS, AND WITH FASTENERS RECOMMENDED BY MANUFACTURER TO ACHIEVE PERFORMANCE REQUIREMENTS SPECIFIED.
1. WET SEAL SYSTEMS: SEAL HORIZONTAL AND VERTICAL JOINTS BETWEEN ADJACENT METAL COMPOSITE MATERIAL WALL PANELS WITH SEALANT BACKING AND SEALANT. INSTALL SEALANT BACKING AND SEALANT.
2. DRY SEAL SYSTEMS: SEAL HORIZONTAL AND VERTICAL JOINTS BETWEEN ADJACENT METAL COMPOSITE MATERIAL WALL PANELS WITH MANUFACTURER'S STANDARD GASKET SYSTEM.
3. RAINSCREEN SYSTEMS: DO NOT APPLY SEALANTS TO JOINTS UNLESS OTHERWISE INDICATED.
C. ACCESSORY INSTALLATION: INSTALL ACCESSORIES WITH POSITIVE ANCHORAGE TO BUILDING AND WEATHERTIGHT MOUNTING. AND PROVIDE FOR THERMAL EXPANSION. COORDINATE INSTALLATION WITH FLASHINGS AND OTHER COMPONENTS.
D. FLASHING AND TRIM: COMPLY WITH PERFORMANCE REQUIREMENTS, MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS, AND STANDARD SHEET METAL PRACTICE. INSTALL WORK WITH LAPS, JOINTS, AND SEAMS THAT ARE PERMANENTLY WATERTIGHT.

1.15 CLEANING

A. REMOVE TEMPORARY PROTECTIVE COVERINGS AND STRIPPABLE FILMS, IF ANY, AS METAL COMPOSITE MATERIAL PANELS ARE INSTALLED, UNLESS OTHERWISE INDICATED IN MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS. ON COMPLETION OF METAL COMPOSITE MATERIAL PANEL INSTALLATION, CLEAN FINISHED SURFACES AS RECOMMENDED BY METAL COMPOSITE MATERIAL PANEL MANUFACTURER, MAINTAIN IN A CLEAN CONDITION DURING CONSTRUCTION.

07 53 00 - SINGLE-PLY MEMBRANE ROOFING

1.1 SUBMITTALS

A. PRODUCT DATA: PROVIDE DATA INDICATING MEMBRANE MATERIALS, FLASHING MATERIALS, INSULATION, SURFACING, AND FASTENERS.
B. SPECIMEN WARRANTY: FOR APPROVAL.
C. SHOP DRAWINGS: INDICATE JOINT OR TERMINATION DETAIL CONDITIONS, CONDITIONS OF INTERFACE WITH OTHER MATERIALS, AND PAVER LAYOUT.
D. MANUFACTURER'S FIELD REPORTS: INDICATE PROCEDURES FOLLOWED, AMBIENT TEMPERATURES, HUMIDITY, WIND VELOCITY DURING APPLICATION, AND SUPPLEMENTARY INSTRUCTIONS GIVEN.
E. WARRANTY: SUBMIT MANUFACTURER WARRANTY AND ENSURE FORMS HAVE BEEN COMPLETED IN OWNER'S NAME AND REGISTERED WITH MANUFACTURER.

1.2 WARRANTY

A. MATERIAL WARRANTY: PROVIDE MEMBRANE MANUFACTURER'S WARRANTY AGREEING TO REPLACE MATERIAL THAT SHOWS MANUFACTURING DEFECTS WITHIN 5 YEARS AFTER INSTALLATION.
B. SYSTEM WARRANTY: PROVIDE ROOFING SYSTEM WARRANTY AGREEING TO REPAIR OR REPLACE ROOFING THAT LEAKS OR IS DAMAGED DUE TO WIND OR OTHER NATURAL CAUSES.
1. WARRANTY TERM: 15 YEARS.
2. FOR REPAIR AND REPLACEMENT INCLUDE COSTS OF BOTH MATERIAL AND LABOR IN WARRANTY.

1.3 ROOFING MEMBRANE AND ASSOCIATED MATERIALS

A. MEMBRANE:
1. MATERIAL AS INDICATED:
a. ETHYLENE PROPYLENE DIENE TERPOLYMER (EPDM)
2. THICKNESS: 60 MIL NOMINAL, UNLESS OTHERWISE NOTED
3. REINFORCING: INTERNAL FABRIC AS INDICATED.
4. SHEET WIDTH: FACTORY FABRICATED INTO LARGEST SHEETS POSSIBLE.
B. SEAMING MATERIALS: AS RECOMMENDED BY MEMBRANE MANUFACTURER.
C. FLEXIBLE FLASHING MATERIAL: SAME MATERIAL AS MEMBRANE.

1.4 MANUFACTURERS

A. ETHYLENE PROPYLENE DIENE TERPOLYMER (EPDM):
1. CARLISLE SYNTEC INCORPORATED
2. FIRESTONE BUILDING PRODUCTS CO
3. GAF MATERIALS CORPORATION
4. GENFLEX ROOFING SYSTEMS
5. JOHNS MANVILLE
B. INSULATION:
1. ATLAS ROOFING CORPORATION
2. CARLISLE SYNTEC INCORPORATED
3. GAF MATERIALS CORPORATION
4. DOWNS CORNING CORP
5. SUBSTITUTIONS: SEE SECTION 016000 - PRODUCT REQUIREMENTS.

1.5 ROOF ASSEMBLY

A. ETHYLENE PROPYLENE DIENE TERPOLYMER (EPDM): ONE PLY MEMBRANE, BALLASTED, OVER INSULATION
1. ROOFING ASSEMBLY REQUIREMENTS
a. COMPLYING WITH ASTM D 4637, TYPE II
b. EXPOSED FACE OF BLACK, UNLESS OTHERWISE NOTED
c. INSULATION THERMAL VALUE (R) MINIMUM: REFER TO DRAWINGS.
B. INSULATION
1. ACCEPTABLE INSULATION TYPES - CONSTANT THICKNESS APPLICATION:
a. POLYISOCYANURATE BOARD.
2. ACCEPTABLE INSULATION TYPES - TAPERED APPLICATION:
a. TAPERED POLYISOCYANURATE BOARD.

1.6 INSULATION

A. POLYISOCYANURATE BOARD INSULATION: ISSFD CELLULAR FOAM, COMPLYING WITH ASTM C1289, TYPE II, CLASS 1, CELLULOSE FELT OR GLASS FIBER MAT BOTH FACES; GRADE 1 AND WITH THE FOLLOWING CHARACTERISTICS:
1. COMPRESSIVE STRENGTH: 16 PSI
2. BOARD SIZE: 48 X 96 INCH.
3. BOARD THICKNESS: TOTAL IN TWO LAYERS AS REQUIRED TO ACHIEVE INDICATED R-VALUE..
4. TAPERED BOARD: SLOPE AS INDICATED; FABRICATE OF FEWEST LAYERS POSSIBLE.

1.7 ACCESSORIES

A. INSULATION COVER BOARD: ASTM C 1177/C 1177M, GLASS-MAT, WATER-RESISTANT GYPSUM SUBSTRATE, 1/2 INCH THICK, FACTORY PRIMED.
1. PRODUCTS:
a. GEORGIA-PACIFIC DENSDECK PRIME: WWW.GP.COM/BUILD.
B. STACK BOOTS: PREFABRICATED FLEXIBLE BOOT AND COLLAR FOR PIPE STACKS THROUGH MEMBRANE; SAME MATERIAL AS MEMBRANE.
C. SHEATHING ADHESIVE: NON-COMBUSTIBLE TYPE, FOR ADHERING GYPSUM SHEATHING TO METAL DECK.
D. SHEATHING JOINT TAPE: MANUFACTURER'S STANDARD WIDTH; SELF-ADHERING.
E. INSULATION JOINT TAPE: GLASS FIBER REINFORCED TYPE AS RECOMMENDED BY INSULATION MANUFACTURER, COMPATIBLE WITH ROOFING MATERIALS; 6 INCHES WIDE; SELF-ADHERING.
F. INSULATION FASTENERS: APPROPRIATE FOR PURPOSE INTENDED AND APPROVED BY ROOFING MANUFACTURER.
G. MEMBRANE ADHESIVE: AS RECOMMENDED BY MEMBRANE MANUFACTURER.
H. INSULATION ADHESIVE: AS RECOMMENDED BY INSULATION MANUFACTURER
I. STRIP REGLET DEVICES: GALVANIZED STEEL, MAXIMUM POSSIBLE LENGTHS PER LOCATION, WITH ATTACHMENT FLANGES.
J. SEALANTS: AS RECOMMENDED BY MEMBRANE MANUFACTURER.
K. WALKWAY PADS: SUITABLE FOR MAINTENANCE TRAFFIC, CONTRASTING COLOR OR OTHERWISE VISUALLY DISTINCTIVE FROM ROOF MEMBRANE.
1. COMPOSITION: TYPE AS RECOMMENDED BY MEMBRANE MANUFACTURER; SIZE AS INDICATED.
2. SURFACE COLOR: WHITE OR YELLOW.

1.8 INSTALLATION - GENERAL

A. PERFORM WORK IN ACCORDANCE WITH NRCA ROOFING AND WATERPROOFING MANUAL AND MANUFACTURER'S INSTRUCTIONS
B. DO NOT APPLY ROOFING MEMBRANE DURING UNSUITABLE WEATHER.
C. DO NOT APPLY ROOFING MEMBRANE WHEN AMBIENT TEMPERATURE IS OUTSIDE THE TEMPERATURE RANGE RECOMMENDED BY MANUFACTURER.
D. DO NOT APPLY ROOFING MEMBRANE TO DAMP OR FROZEN DECK SURFACE OR WHEN PRECIPITATION IS EXPECTED OR OCCURRING.
E. DO NOT EXPOSE MATERIALS VULNERABLE TO WATER OR SUN DAMAGE IN QUANTITIES GREATER THAN CAN BE WEATHERPROOFED THE SAME DAY.
F. COORDINATE THE WORK WITH INSTALLATION OF ASSOCIATED COUNTERFLASHINGS INSTALLED BY OTHER SECTIONS AS THE WORK OF THIS SECTION PROCEEDS.

1.9 EXAMINATION

A. VERIFY THAT SURFACES AND SITE CONDITIONS ARE READY TO RECEIVE WORK.
B. VERIFY DECK IS SUPPORTED AND SECURE.
C. VERIFY DECK IS CLEAN AND SMOOTH, FLAT, FREE OF DEPRESSIONS, WAVES, OR PROJECTIONS. PROPERLY SLOPED AND SUITABLE FOR INSTALLATION OF ROOF SYSTEM.
D. VERIFY DECK SURFACES ARE DRY AND FREE OF SNOW OR ICE.

1.10 METAL DECK PREPARATION

A. INSTALL DECK SHEATHING ON METAL DECK:
1. LAY WITH LONG SIDE AT RIGHT ANGLE TO FLUTES; STAGGER END JOINTS; PROVIDE SUPPORT AT ENDS.
2. CUT SHEATHING CLEANLY AND ACCURATELY AT ROOF BREAKS AND PROTRUSIONS TO PROVIDE SMOOTH SURFACE.
3. TAPE JOINTS.

07 53 00 - SINGLE-PLY MEMBRANE ROOFING (CONT)

1.11 INSULATION - UNDER MEMBRANE

A. AT MECHANICALLY FASTENED AND ADHERED INSULATION: INSTALL EACH LAYER OF INSULATION TO DECK USING MECHANICAL FASTENERS OR ADHESIVE SPECIFICALLY DESIGNED, SIZED, AND FORMULATED FOR FASTENING SPECIFIED BOARD-TYPE ROOF INSULATION TO DECK TYPE.
1. FASTEN FIRST LAYER OF INSULATION ACCORDING TO REQUIREMENTS IN FM GLOBAL'S "ROOFNAV" FOR SPECIFIED INDUSTRIAL OCCUPANCY CLASSIFICATION.
2. SET EACH SUBSEQUENT LAYER OF INSULATION IN RIBBONS OF BEAD-APPLIED INSULATION ADHESIVE, FIRMLY PRESSING AND MAINTAINING INSULATION IN PLACE.
B. WHEN ROOF ASSEMBLY INCLUDES MORE THAN ONE INSULATION LAYER, INSTALL COVER BOARDS OVER INSULATION WITH LONG JOINTS IN CONTINUOUS STRAIGHT LINES WITH END JOINTS STAGGERED BETWEEN ROWS. OFFSET JOINTS OF INSULATION FROM BUILDING AND AROUND PENETRATIONS THROUGH ROOF.
1. FACTOR COVER BOARDS ACCORDING TO REQUIREMENTS IN FM GLOBAL'S "ROOFNAV" FOR SPECIFIED WINDSTORM RESISTANCE CLASSIFICATION.
C. LAY SUBSEQUENT LAYERS OF INSULATION WITH JOINTS STAGGERED AS INDICATED FROM JOINTS OF PRECEDING LAYER.
D. PLACE TAPERED INSULATION TO THE REQUIRED SLOPE PATTERN IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
E. ON METAL DECK, PLACE BOARDS PARALLEL TO FLUTES WITH INSULATION BOARD EDGES BEARING ON DECK FLUTES.
F. LAY BOARDS WITH EDGES IN MODERATE CONTACT WITHOUT FORCING. CUT INSULATION TO FIT NEATLY TO PERIMETER BLOCKING AND AROUND PENETRATIONS THROUGH ROOF.
G. TAPE JOINTS OF INSULATION IN ACCORDANCE WITH ROOFING AND INSULATION MANUFACTURERS' INSTRUCTIONS.
H. AT ROOF DRAINS, USE FACTORY-TAPERED BOARDS TO SLOPE DOWN TO ROOF DRAINS OVER A DISTANCE OF 18 INCHES.
I. DO NOT APPLY MORE INSULATION THAN CAN BE COVERED WITH MEMBRANE IN SAME DAY.

1.12 MEMBRANE ROOFING INSTALLATION

A. MECHANICALLY FASTEN OR APPLY MEMBRANE ROOFING IN ACCORDANCE WITH CONTRACT DOCUMENT "ROOF ASSEMBLY" DESCRIPTION OVER AREAS TO RECEIVE ROOFING AND INSTALL ACCORDING TO ROOFING SYSTEM MANUFACTURER'S WRITTEN INSTRUCTIONS.
1. FOR INSPIRE ATTACHMENT, INSTALL MEMBRANES ROOFING WITH LONG DIMENSION PERPENDICULAR TO STEEL ROOF DECK FLUTES.
B. START INSTALLATION OF MEMBRANE ROOFING IN PRESENCE OF ROOFING SYSTEM MANUFACTURER'S TECHNICAL PERSONNEL.
C. ACCURATELY ALIGN MEMBRANE ROOFING AND MAINTAIN UNIFORM SIDE AND END LAPS OF MINIMUM DIMENSIONS REQUIRED BY MANUFACTURER. STAGGER END LAPS.
D. MECHANICALLY FASTEN OR ADHERE MEMBRANE ROOFING SECURELY AT TERMINATIONS AND PENETRATIONS.
E. APPLY MEMBRANE ROOFING WITH SIDE LAPS SHINGLED WITH SLOPE OF ROOF DECK WHERE POSSIBLE.
F. IN-SEAM ATTACHMENT AT TPO MEMBRANES: SECURE ONE EDGE OF TPO SHEET USING FASTENING PLATES OR METAL BATTEN CAP SPACED WITHIN SEAM, AND MECHANICALLY FASTEN TPO SHEET TO ROOF DECK.
G. SEAMS: CLEAN SEAM AREAS, OVERLAP MEMBRANE ROOFING, AND HOT-AIR WELD SIDE AND END LAPS OF MEMBRANE ROOFING AND MEMBRANE FLASHINGS ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS TO ENSURE A WATERTIGHT SEAM INSTALLATION.
1. TEST LAP EDGES WITH PROBE TO VERIFY SEAM WELD CONTINUITY. APPLY LAP SEALANT TO SEAL CUT EDGES OF SHEET MEMBRANE.
2. TRIM PROJECTING LENGTH OF SEAMS A MINIMUM OF TWICE DAILY AND REPAIR SEAM SAMPLE AREAS.
3. REPAIR TEARS, VOIDS, AND LAPPED SEAMS IN ROOFING THAT DOES NOT COMPLY WITH REQUIREMENTS.
H. SPREAD SEALANT BED OVER DECK DRAIN FLANGE AT ROOF DRAINS AND SECURELY SEAL MEMBRANE ROOFING IN PLACE WITH CLAMPING RING.
I. INSTALL MEMBRANE ROOFING AND AUXILIARY MATERIALS TO TIE IN TO EXISTING TO MAINTAIN WEATHERTIGHTNESS OF TRANSITION.
J. SPREAD SEALANT BED OVER DEDGORAIN FLANGE AT ROOF DRAINS, AND SECURELY SEAL ROOFING IN PLACE WITH CLAMPING RING.
K. MECHANICALLY FASTEN OR ADHERE PERIMETER OF ROOFING ACCORDING TO REQUIREMENTS IN SPRI RP-4.
L. INSTALL WALKWAY PADS. SPACE PAD JOINTS TO PERMIT DRAINAGE.

1.13 BALLASTING

A. WHERE CONTRACT DOCUMENT "ROOF ASSEMBLY" DESCRIPTION INCLUDES ROCK OR STONE BALLAST, CONTRACTOR SHALL TAKE CARE TO PREVENT MEMBRANE DAMAGE, CRUSHING OF INSULATION, AND OVERLOADING OF THE BUILDING STRUCTURE DURING THE BALLASTING OPERATION.
B. ROOFING TO BE SPOT BALLASTED AT THE END OF EACH WORKING DAY.
C. SEAMS ARE NOT TO BE COVERED DURING SPOT BALLASTING
D. AFTER EACH AREA OF WORK IS BALLASTED, CHECK AREAS ARE CHECKED, CONTACT OWNER'S REPRESENTATIVE AND MEMBRANE MANUFACTURER FOR INSPECTION.
E. WHEN THE MEMBRANE IS APPROVED IN WRITING BY THE OWNER'S REPRESENTATIVE, MEMBRANE MANUFACTURER, AND CONTRACTOR, AND FOLLOWING COMPLETION OF ANY REQUIRED CORRECTIVE WORK, PROMPTLY APPLY BALLAST OVER ENTIRE ROOF AREA. BALLAST RATE SHALL BE AS INDICATED IN THE STRUCTURAL CONTRACT DOCUMENTS, OR AS REQUIRED FOR SPECIFIED ROOF FM GLOBAL RATING.
F. CONSTRUCTION JOINTS: PROVIDE TOTAL BALLAST AS REQUIRED TO MEET SPECIFIED BALLAST RATES.
G. BALLAST SHALL BE UNIFORMLY INSTALLED UP AGAINST ALL PENETRATIONS AND WALKWAY PAVER, IF USED.
H. CONTRACTOR SHALL PREVENT BALLAST FROM ENTERING DRAIN LINES.

1.14 FIELD QUALITY CONTROL

A. REQUIRE SITE ATTENDANCE OF ROOFING AND INSULATION MATERIAL MANUFACTURERS DAILY DURING INSTALLATION OF THE WORK.

1.15 CLEANING

A. REMOVE ADHESIVE MARKINGS FROM FINISHED SURFACES.
B. REMOVE DEBRIS WHERE FINISHED SURFACES ARE SOILED BY WORK OF THIS SECTION. CONSULT MANUFACTURER OF SURFACES FOR CLEANING ADVICE AND CONFORM TO THEIR DOCUMENTED INSTRUCTIONS.
C. REPAIR OR REPLACE DEFACED OR DAMAGED FINISHES CAUSED BY WORK OF THIS SECTION.

1.16 PROTECTION

A. PROTECT INSTALLED ROOFING AND FLASHINGS FROM CONSTRUCTION OPERATIONS.
B. WHERE TRAFFIC MUST CONTINUE OVER FINISHED ROOF MEMBRANE, PROTECT SURFACES USING DURABLE MATERIALS.

07 62 00 - SHEET METAL FLASHING AND TRIM

1.1 SUBMITTALS

A. SHOP DRAWINGS: INDICATE MATERIAL PROFILE, JOINTING PATTERN, JOINTING DETAILS, FASTENING METHODS, FLASHINGS, TERMINATIONS, AND INSTALLATION DETAILS.
B. CERTIFICATES: PROVIDE ES-1 CERTIFICATION DOCUMENTATION FROM ANSI/SPRI FOR ALL ROOF EDGE PRODUCTS PROVIDED.

1.2 QUALITY ASSURANCE

A. PERFORM WORK IN ACCORDANCE WITH SMACNA ARCHITECTURAL SHEET METAL MANUAL REQUIREMENTS AND STANDARD DETAILS, EXCEPT AS OTHERWISE INDICATED.
B. FABRICATOR AND INSTALLER QUALIFICATIONS: COMPANY SPECIALIZING IN SHEET METAL WORK WITH THREE YEARS OF DOCUMENTED EXPERIENCE.
C. PROVIDE PRODUCTS THAT HAVE BEEN TESTED TO RESIST WIND UPLIFT AS REQUIRED BY ANSI/SPRI ES-1.

1.3 DELIVERY, STORAGE, AND HANDLING

A. TACK MATERIAL TO PREVENT TWISTING, BENDING, AND ABRASION, AND TO PROVIDE VENTILATION. SLOPE METAL SHEETS TO DRAINAGE.
B. PREVENT CONTACT WITH MATERIALS THAT COULD CAUSE DISCOLORATION OR STAINING.

1.4 WARRANTY

A. PROVIDE TWO YEAR WATER TIGHTNESS WARRANTY AGAINST LEAKS THROUGH SHEET METAL FLASHING AND AT TERMINATIONS.

1.5 SHEET MATERIALS

A. PRE-FINISHED GALVANNEED SHEET: ASTM A653/A653M, WITH G90/Z275 ZINC COATING; MINIMUM 0.02 INCH THICK BASE METAL, SHOP PRETREATED AND PAINTED.
B. PRE-FINISHED ALUMINUM SHEET: MINIMUM 0.040 INCH THICK BASE METAL, SHOP PRE-COATED WITH PVDF COATING.
C. PVDF (POLYVINYLIDENE FLUORIDE) COATING: SUPERIOR PERFORMANCE ORGANIC FINISH, AAMA 2605; MULTIPLE COAT, THERMALLY CURED FLUOROPOLYMER FINISH SYSTEM.

1.6 ACCESSORIES

A. FASTENERS: GALVANIZED STEEL, WITH SOFT NEOPRENE WASHERS, NO EXPOSED FASTENERS SHALL BE PERMITTED.
B. UNDERLAYMENT: ASTM D226, ORGANIC ROOFING FELT, TYPE I (NO. 15).
C. PRIMER: ZINC CHROMATE TYPE.
D. PROTECTIVE BACKING PAINT: ZINC MOLYBDATE ALKYD.
E. SEALANT: TYPE S-SP SPECIFIED IN SECTION 079005.
F. PLASTIC CEMENT: ASTM D4586, TYPE I.
G. REGLETS: SURFACE MOUNTED TYPE, GALVANIZED STEEL.

1.7 FABRICATION

A. FORM SECTIONS TRUE TO SHAPE, ACCURATE IN SIZE, SQUARE, AND FREE FROM DISTORTION OR DEFECTS.
B. FORM PIECES IN LONGEST POSSIBLE LENGTHS.
C. HEM EXPOSED EDGES ON UNDERSIDE 1/2 INCH MITER AND SEAM CORNERS.
D. FORM MATERIAL WITH FLAT LOCK SEAMS, EXCEPT WHERE OTHERWISE INDICATED. AT MOVING JOINTS, USE SEALED LAPPED, BAYONET-TYPE OR INTERLOCKING HOOKED SEAMS.
E. FABRICATE CORNERS FROM ONE PIECE WITH MINIMUM 18 INCH LONG LEGS; SEAM FOR RIGIDITY, SEAL WITH SEALANT.
F. FABRICATE VERTICAL FACES WITH BOTTOM EDGE FORMED OUTWARD 1/4 INCH AND HEMMED TO FORM DRIP.
G. FABRICATE FLASHINGS TO ALLOW TOE TO EXTEND 2 INCHES OVER ROOFING GRAVEL. RETURN AND BRAKE EDGES.

1.8 EXAMINATION

A. VERIFY ROOF OPENINGS, CURBS, PIPES, SLEEVES, DUCTS, AND VENTS THROUGH ROOF ARE SOLIDLY SET, RESLETS IN PLACE, AND NAILING STRIPS LOCATED.
B. VERIFY ROOFING TERMINATION AND BASE FLASHINGS ARE IN PLACE, SEALED, AND SECURE.

07 62 00 - SHEET METAL FLASHING AND TRIM (CONT)

1.9 PREPARATION

A. INSTALL STARTER AND EDGE STRIPS, AND CLEATS BEFORE STARTING INSTALLATION.
B. INSTALL SURFACE MOUNTED REGLETS TRUE TO LINES AND LEVELS. SEAL TOP OF REGLETS WITH SEALANT
C. BACK PAINT CONCEALED METAL SURFACES WITH PROTECTIVE BACKING PAINT TO A MINIMUM DRY FILM THICKNESS OF 15 MIL.

1.10 INSTALLATION

A. CONFORM TO DRAWING DETAILS.
B. SECURE FLASHINGS IN PLACE USING CONCEALED FASTENERS. USE EXPOSED FASTENERS ONLY WHERE UNAVOIDABLE.
C. APPLY PLASTIC CEMENT COMPOUND BETWEEN METAL FLASHINGS AND FELT FLASHINGS.
D. FIT FLASHINGS TIGHT IN PLACE. MAKE CORNERS SQUARE, SURFACES TRUE AND STRAIGHT IN PLANES, AND LINES ACCURATE TO PROFILES.
E. SEAL METAL JOINTS WATERTIGHT.

1.11 FIELD QUALITY CONTROL

A. SEE SECTION 014000 - QUALITY REQUIREMENTS, FOR FIELD INSPECTION REQUIREMENTS.
B. INSPECTION WILL INVOLVE SURVEILLANCE OF WORK DURING INSTALLATION TO ASCERTAIN COMPLIANCE WITH SPECIFIED REQUIREMENTS.

1.12 SCHEDULE OF PRODUCTS USED

A. FLASHING AND COUNTER FLASHING: FABRICATE AS INDICATED ON DRAWINGS AND IN ACCORDANCE WITH SMACNA ARCHITECTURAL SHEET METAL MANUAL, CHAPTER 4.
B. COPING: AS INDICATED ON DRAWINGS AND IN ACCORDANCE WITH SMACNA FIGURE 3-4A.
C. THROUGH WALL SCUPPER: AS INDICATED ON DRAWINGS AND IN ACCORDANCE WITH SMACNA 1-26.
D. CONDUCTOR HEAD: AS INDICATED ON DRAWINGS AND IN ACCORDANCE WITH SMACNA 1_25F.
E. DOWNSPOUT: AS INDICATED ON DRAWINGS AND IN ACCORDANCE WITH SMACNA FIGURE 1-23J.
1. HANGERS: SMACNA FIGURE 1-36
F. SPLASH PAN: SMACNA FIGURE 1-36 WITH CORRUGATIONS TO SREAK WATER FLOW.

07 62 19 - FLEXIBLE FLASHING

1.1 SUMMARY

A. A. SECTION INCLUDES:
1. FORMED PRODUCTS: CONCEALED FLASHING WITHIN WALL ASSEMBLIES WHERE INDICATED OR OTHERWISE WHERE REQUIRED TO PROTECT AND SHED INCIDENTAL WATER TO THE EXTERIOR.

1.2 PERFORMANCE REQUIREMENTS

A. GENERAL: FLASHING AND TRIM ASSEMBLIES AS INDICATED SHALL WITHSTAND STRUCTURAL MOVEMENT, THERMALLY INDUCED MOVEMENT, AND EXPOSURE TO WEATHER WITHOUT FAILURE DUE TO DEFECTIVE MANUFACTURE, FABRICATION, INSTALLATION, OR OTHER DEFECTS IN CONSTRUCTION. COMPLETED SHEET METAL FLASHING AND TRIM SHALL NOT RATTLE, LEAK, OR DISCOLOR, AND SHALL REMAIN WATERTIGHT.
B. REPAIR TEARS, VOIDS, AND LAPPED SEAMS IN ROOFING THAT DOES NOT COMPLY WITH REQUIREMENTS.
C. SPREAD SEALANT BED OVER DECK DRAIN FLANGE AT ROOF DRAINS AND SECURELY SEAL MEMBRANE ROOFING IN PLACE WITH CLAMPING RING.
D. INSTALL MEMBRANE ROOFING AND AUXILIARY MATERIALS TO TIE IN TO EXISTING TO MAINTAIN WEATHERTIGHTNESS OF TRANSITION.
E. SPREAD SEALANT BED OVER DEDGORAIN FLANGE AT ROOF DRAINS, AND SECURELY SEAL ROOFING IN PLACE WITH CLAMPING RING.
F. MECHANICALLY FASTEN OR ADHERE PERIMETER OF ROOFING ACCORDING TO REQUIREMENTS IN SPRI RP-4.
G. INSTALL WALKWAY PADS. SPACE PAD JOINTS TO PERMIT DRAINAGE.

1.3 SUBMITTALS

A. PRODUCT DATA: FOR EACH TYPE OF PRODUCT INDICATED, INCLUDE CONSTRUCTION DETAILS, MATERIAL DESCRIPTIONS, DIMENSIONS OF INDIVIDUAL COMPONENTS AND PROFILES, AND FINISHES FOR EACH MANUFACTURED PRODUCT AND ACCESSORY.
B. SHOP DRAWINGS: SHOW FABRICATION AND INSTALLATION LAYOUTS OF SHEET METAL FLASHING AND TRIM, INCLUDING PLANS, ELEVATIONS, EXPANSION-JOINT LOCATIONS, AND KEYED DETAILS. DISTINGUISH BETWEEN SHOP- AND FIELD-ASSEMBLED WORK.

1.4 DELIVERY, STORAGE, AND HANDLING

A. DO NOT STORE FLASHING MATERIALS IN CONTACT WITH OTHER MATERIALS THAT MIGHT CAUSE STAINING, DENTING, OR OTHER SURFACE DAMAGE. STORE FLASHING MATERIALS AWAY FROM UNCURED CONCRETE AND MASONRY.
B. PROTECT STRIPPABLE PROTECTIVE COVERING ON SHEET METAL FLASHING AND TRIM FROM EXPOSURE TO SUNLIGHT AND HIGH HUMIDITY, EXCEPT TO THE EXTENT NECESSARY FOR THE PERIOD OF SHEET METAL FLASHING AND TRIM INSTALLATION.

1.5 FLEXIBLE FLASHING

A. SELF-ADHESIVE FLEXIBLE FLASHING PRODUCT CONSISTING OF A PLIABLE, ADHESIVE RUBBERIZED-ASPHALT COMPOUND, BONDED TO A HIGH-DENSITY, CROSS-LAMINATED POLYETHYLENE FILM TO PRODUCE AN OVERALL THICKNESS OF NOT LESS THAN 40 MILS.
1. PRODUCTS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE ONE OF THE FOLLOWING:
a. ADVANCED BUILDING PRODUCTS INC.; STRIP-NAFLASH.
b. CARLISLE COATINGS & WATERPROOFING: CCW-705 AIR & VAPOR BARRIER STRIPS.
c. GRACE CONSTRUCTION PRODUCTS: PERM-A-BARRIER DETAIL MEMBRANE.
d. HENRY: BLUESKIN SA

1.5 HIGH TEMPERATURE FLASHING

A. SELF-ADHERING, HIGH-TEMPERATURE SHEET: MINIMUM 30 TO 40 MILS THICK, CONSISTING OF SLIP-RESISTING POLYETHYLENE/FILM TOP SURFACE LAMINATED TO LAYER OF BUTYL OR SBS-MODIFIED ASPHALT ADHESIVE, WITH RELEASE-PAPER BACKING AND LOW-VOC, SYNTHETIC RUBBER PRIMER WHEN RECOMMENDED BY MANUFACTURER.
1. THERMAL STABILITY: ASTM D 1970; STABLE AFTER TESTING AT 240 DEG F.
2. LOW-TEMPERATURE FLEXIBILITY: ASTM D 1970; PASSES AFTER TESTING AT MINUS 20 DEG F.
3. PRODUCTS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE ONE OF THE FOLLOWING:
a. CARLISLE COATINGS & WATERPROOFING INC.; CCW WIP 300HT.
b. GRACE CONSTRUCTION PRODUCTS; A UNIT OF W. R. GRACE & CO.; ULTRA.
c. HENRY COMPANY; BLUESKIN PE200 HT.
d. OWENS CORNING; WEATHERLOCK METAL HIGH TEMPERATURE UNDERLAYMENT.

1.7 MISCELLANEOUS MATERIALS

A. GENERAL: PROVIDE MATERIALS AND TYPES OF FASTENERS, SEPARATORS, SEALANTS, AND OTHER MISCELLANEOUS ITEMS AS REQUIRED FOR COMPLETE METAL FLASHING INSTALLATION AND RECOMMENDED BY MANUFACTURER OF PRIMARY SHEET METAL OR MANUFACTURED ITEM UNLESS OTHERWISE INDICATED.
B. ELASTOMERIC SEALANT: ASTM C 920, ELASTOMERIC SILICONE POLYMER SEALANT; LOW MODULUS; OF TYPE, GRADE, CLASS, AND USE CLASSIFICATIONS REQUIRED TO SEAL JOINTS IN SHEET METAL FLASHING AND TRIM AND REMAIN WATERTIGHT.

1.8 EXAMINATION

A. A. EXAMINE SUBSTRATES, AREAS, AND CONDITIONS, WITH INSTALLER PRESENT, TO VERIFY ACTUAL LOCATIONS, DIMENSIONS AND OTHER CONDITIONS AFFECTING PERFORMANCE OF THE WORK.
1. VERIFY COMPLIANCE WITH REQUIREMENTS FOR INSTALLATION TOLERANCES OF SUBSTRATES.
2. VERIFY THAT SUBSTRATE IS SOUND, DRY, SMOOTH, CLEAN, SLOPED FOR DRAINAGE, AND SECURELY ANCHORED.
B. FOR THE RECORD, PREPARE WRITTEN REPORT, ENDORSED BY INSTALLER, LISTING CONDITIONS DETRIMENTAL TO PERFORMANCE OF THE WORK.
C. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

1.9 FLASHING INSTALLATION

A. GENERAL: INSTALL AS INDICATED ON DRAWINGS AND PER MANUFACTURER'S RECOMMENDATIONS.
B. SELF-ADHERING SHEET FLASHING: INSTALL SELF-ADHERING SHEET FLASHING, WRINKLE FREE. APPLY PRIMER IF REQUIRED BY FLASHING MANUFACTURER. COMPLY WITH TEMPERATURE RESTRICTIONS OF FLASHING MANUFACTURER FOR INSTALLATION. APPLY IN SHINGLE FASHION TO SHED WATER, WITH END LAPS OF NOT LESS THAN 6 INCHES STAGGERED 24 INCHES BETWEEN COURSES. OVERLAP SIDE EDGES NOT LESS THAN 3-1/2 INCHES. ROLL LAPS WITH ROLLER. COVER FLASHING WITH SUBSEQUENT CONSTRUCTION WITHIN 14 DAYS.
C. C. LOCATIONS:
1. FLEXIBLE FLASHING: AS INDICATED ON DRAWINGS, OR AT ALL EXTERIOR WINDOWS, DOORS OR OTHER PENETRATIONS WHERE HIGH TEMPERATURE FLASHING IS NOT REQUIRED.
2. HIGH TEMPERATURE FLASHING: AS INDICATED ON DRAWINGS, OR AT ALL LOCATIONS WHERE FLASHING WILL BE IN CONTACT WITH METAL COPING OR METAL PANELS WHERE HIGH TEMPERATURES EXIST.

07 71 29 - MANUFACTURED ROOF EXPANSION JOINTS

1.1 SUMMARY

A. SECTION INCLUDES:
1. FLANGED BELLOWS-TYPE ROOF EXPANSION JOINTS.
2. ALUMINUM ROOF EXPANSION JOINTS.

1.2 PRESTALLATION MEETINGS

A. PRESTALLATION CONFERENCE: CONDUCT CONFERENCE AT PROJECT SITE.

1.3 ACTION SUBMITTALS

A. PRODUCT DATA: FOR EACH TYPE OF PRODUCT.
B. SHOP DRAWINGS: FOR ROOF EXPANSION JOINTS.
C. SAMPLES: FOR EACH EXPOSED PRODUCT AND FOR EACH COLOR SPECIFIED.

1.4 INFORMATIONAL SUBMITTALS

A. QUALIFICATION DATA.
B. PRODUCT TEST REPORTS.
C. SAMPLE WARRANTY.

1.5 QUALITY ASSURANCE

A. INSTALLER QUALIFICATIONS: INSTALLER OF ROOFING MEMBRANE.

1.6 WARRANTY

A. SPECIAL WARRANTY: MANUFACTURER AND INSTALLER AGREE

CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED

07 84 13 - PENETRATION FIRESTOPPING (CONT)

1.3 MANUFACTURERS

A. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:
1. GRACE CONSTRUCTION PRODUCTS.
2. HILTI INC.
3. NELSON FIRESTOP PRODUCTS.
4. RECTORSEAL CORPORATION.
5. SPECIFIED TECHNOLOGIES INC.
6. 3M FIRE PROTECTION PRODUCTS.

1.4 PENETRATION FIRESTOPPING

A. PROVIDE PENETRATION FIRESTOPPING THAT IS PRODUCED AND INSTALLED TO RESIST SPREAD OF FIRE ACCORDING TO REQUIREMENTS INDICATED, RESIST PASSAGE OF SMOKE AND OTHER GASES, AND MAINTAIN ORIGINAL FIRE-RESISTANCE RATING OF CONSTRUCTION PENETRATED. PENETRATION FIRESTOPPING SYSTEMS SHALL BE COMPATIBLE WITH ONE ANOTHER, WITH THE SUBSTRATES FORMING OPENINGS, AND WITH PENETRATING ITEMS IF ANY.
B. PENETRATIONS IN FIRE-RESISTANCE-RATED WALLS: PROVIDE PENETRATION FIRESTOPPING WITH RATINGS DETERMINED PER ASTM E 814 OR UL 1479, BASED ON TESTING AT A POSITIVE PRESSURE DIFFERENTIAL OF 0.01-INCH WG.
1. FIRE-RESISTANCE-RATED WALLS INCLUDE FIRE WALLS SMOKE-BARRIER WALLS AND FIRE PARTITIONS.
2. F-RATING: NOT LESS THAN THE FIRE-RESISTANCE RATING OF CONSTRUCTIONS PENETRATED.
C. PENETRATIONS IN HORIZONTAL ASSEMBLIES: PROVIDE PENETRATION FIRESTOPPING WITH RATINGS DETERMINED PER ASTM E 814 OR UL 1479, BASED ON TESTING AT A POSITIVE PRESSURE DIFFERENTIAL OF 0.01-INCH WG.
1. HORIZONTAL ASSEMBLIES INCLUDE FLOORS FLOOR/CEILING ASSEMBLIES AND CEILING MEMBRANES OF ROOF/CEILING ASSEMBLIES.
2. F-RATING: AT LEAST 1 HOUR, BUT NOT LESS THAN THE FIRE-RESISTANCE RATING OF CONSTRUCTIONS PENETRATED.
3. T-RATING: AT LEAST 1 HOUR, BUT NOT LESS THAN THE FIRE-RESISTANCE RATING OF CONSTRUCTIONS PENETRATED EXCEPT FOR FLOOR PENETRATIONS WITHIN THE CAVITY OF A WALL.
D. PENETRATIONS IN SMOKE BARRIERS: PROVIDE PENETRATION FIRESTOPPING WITH RATINGS DETERMINED PER UL 1479.
1. L-RATING: NOT EXCEEDING 5.0 CFM/SQ. FT. OF PENETRATION OPENING AT 0.30-INCH WG AT BOTH AMBIENT AND ELEVATED TEMPERATURES.
E. EXPOSED PENETRATION FIRESTOPPING: PROVIDE PRODUCTS WITH FLAME-SPREAD AND SMOKE-DEVELOPED INDEXES OF LESS THAN 25 AND 450 OR LESS, RESPECTIVELY, PER ASTM E 84.
F. VOC CONTENT: PROVIDE PENETRATION FIRESTOPPING THAT COMPLIES WITH THE FOLLOWING LIMITS FOR VOC CONTENT WHEN CALCULATED ACCORDING TO 40 CFR 59, SUBPART D (EPA METHOD 24):
1. ARCHITECTURAL SEALANTS: 250 G/L.
2. SEALANT PRIMERS FOR NONPOROUS SUBSTRATES: 250 G/L.
3. SEALANT PRIMERS FOR POROUS SUBSTRATES: 775 G/L.
G. ACCESSORIES: PROVIDE COMPONENTS FOR EACH PENETRATION FIRESTOPPING SYSTEM THAT ARE NEEDED TO INSTALL FILL MATERIALS AND TO MAINTAIN SYSTEM RATINGS. USE ONLY THOSE COMPONENTS SPECIFIED BY PENETRATION FIRESTOPPING MANUFACTURER AND APPROVED BY QUALIFIED TESTING AND INSPECTING AGENCY FOR FIRESTOPPING INDICATED.

1.5 MIXING

A. FOR THOSE PRODUCTS REQUIRING MIXING BEFORE APPLICATION, COMPLY WITH PENETRATION FIRESTOPPING MANUFACTURER'S WRITTEN INSTRUCTIONS FOR ACCURATE PROPORTIONING OF MATERIALS, WATER (IF REQUIRED), TYPE OF MIXING EQUIPMENT, SELECTION OF MIXER SPEEDS,

1.6 EXAMINATION

A. EXAMINE SUBSTRATES AND CONDITIONS, WITH INSTALLER PRESENT, FOR COMPLIANCE WITH REQUIREMENTS FOR OPENING CONFIGURATIONS, PENETRATING ITEMS, SUBSTRATES, AND OTHER CONDITIONS AFFECTING PERFORMANCE OF THE WORK.
B. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

1.7 PREPARATION

A. SURFACE CLEANING: CLEAN OUT OPENINGS IMMEDIATELY BEFORE INSTALLING PENETRATION FIRESTOPPING TO COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS AND WITH THE FOLLOWING REQUIREMENTS:
1. REMOVE FROM SURFACES OF OPENING SUBSTRATES AND FROM PENETRATING ITEMS FOREIGN MATERIALS THAT COULD INTERFERE WITH ADHESION OF FIRESTOPPING.
2. CLEAN OPENING SUBSTRATES AND PENETRATING ITEMS TO PRODUCE CLEAN, SOUND SURFACES CAPABLE OF DEVELOPING OPTIMUM BOND WITH FIRESTOPPING. REMOVE LOOSE PARTICLES REMAINING FROM CLEANING OPERATION.
B. PRIMING: PRIME SUBSTRATES WHERE RECOMMENDED IN WRITING BY MANUFACTURER USING THAT MANUFACTURER'S RECOMMENDED PRODUCTS AND METHODS. CONFINE PRIMERS TO AREAS OF BOND; DO NOT ALLOW SPILLAGE AND MIGRATION ONTO EXPOSED SURFACES.

1.8 INSTALLATION

A. GENERAL: INSTALL PENETRATION FIRESTOPPING TO COMPLY WITH MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS AND PUBLISHED DRAWINGS FOR PRODUCTS AND APPLICATIONS INDICATED.
B. INSTALL FORMING MATERIALS AND OTHER ACCESSORIES OF TYPES REQUIRED TO SUPPORT FILL MATERIALS DURING THEIR APPLICATION AND IN THE POSITION NEEDED TO PRODUCE CROSS-SECTIONAL SHAPES AND DEPTHS REQUIRED TO ACHIEVE FIRE RATINGS INDICATED.
1. AFTER INSTALLING FILL MATERIALS AND ALLOWING THEM TO FULLY CURE, REMOVE COMBUSTIBLE FORMING MATERIALS AND OTHER ACCESSORIES NOT INDICATED AS PERMANENT COMPONENTS OF FIRESTOPPING.

1.9 PENETRATION FIRESTOPPING SCHEDULE

A. WHERE UL-CLASSIFIED SYSTEMS ARE INDICATED, THEY REFER TO SYSTEM NUMBERS IN UL'S "FIRE RESISTANCE DIRECTORY" UNDER PRODUCT CATEGORY XHEZ.
B. WHERE INTERTEK ETL SEMKO-LISTED SYSTEMS ARE INDICATED, THEY REFER TO DESIGN NUMBERS IN INTERTEK ETL SEMKO'S "DIRECTORY OF LISTED BUILDING PRODUCTS" UNDER "FIRESTOP SYSTEMS."
C. WHERE FM GLOBAL-APPROVED SYSTEMS ARE INDICATED, THEY REFER TO DESIGN NUMBERS LISTED IN FM GLOBAL'S "BUILDING MATERIALS APPROVAL GUIDE" UNDER "WALL AND FLOOR PENETRATION FIRE STOPS."
D. FIRESTOP SYSTEMS WITH NO PENETRATING ITEMS (FS-1): COMPLY WITH THE FOLLOWING:
1. PIPES, PLASTIC OR METAL, CONDUIT IN VERTICAL RUNS, INSTALLED THROUGH CAST-IN-PLACE FIRESTOP DEVICES.
a. ACCEPTABLE UL-CLASSIFIED SYSTEMS WITH FA 1000 SERIES SYSTEMS (EQUIVALENT TO, BUT NOT LIMITED TO, THE FOLLOWING:
b. FA1016, FA1017, FA3993, FA2054 BY HILTI.
c. CP 649 CASTIN FIRESTOP DEVICE BY HILTI.
d. CP653 SPEED SLEEVE BY HILTI.
E. FIRESTOP SYSTEMS WITH NO PENETRATING ITEMS (FS-2): COMPLY WITH THE FOLLOWING:
1. ACCEPTABLE UL-CLASSIFIED SYSTEMS WITH 1000 SERIES SYSTEMS (EQUIVALENT TO, BUT NOT LIMITED TO, THE FOLLOWING: CAJ0059, CAJ4070 BY HILTI OR CAJ4012, CAJ4182 BY GRACE.
2. TYPE OF FILL MATERIALS: ONE OR MORE OF THE FOLLOWING:
a. LATEX SEALANT.
b. SILICONE SEALANT.
c. ACRYLIC SEALANT.
d. INTUMESCENT PUTTY.
e. MORTAR.
f. PREFORMED INTUMESCENT BLOCKS.
g. PILLOWS/BAGS
F. FIRESTOP SYSTEMS FOR METALLIC PIPES, CONDUIT, OR TUBING (FS-3): COMPLY WITH THE FOLLOWING:
1. ACCEPTABLE UL-CLASSIFIED SYSTEMS WITH CAJ, WL, OR FC 1000 SERIES SYSTEMS, EQUIVALENT TO, BUT NOT LIMITED TO, THE FOLLOWING: CAJ1164, CAJ1291, CAJ1277, CAJ1362, CAJ1398, WL1054, WL1249, FC1006 BY HILTI OR CAJ1463, CAJ1239, CAJ1499, WL1152, WL1267, FC1009 BY GRACE.
2. TYPE OF FILL MATERIALS: ONE OR MORE OF THE FOLLOWING:
a. LATEX SEALANT.
b. SILICONE SEALANT.
c. ACRYLIC SEALANT.
d. INTUMESCENT PUTTY.
e. MORTAR.
f. POLYURETHANE FIRESTOP FOAM.
G. FIRESTOP SYSTEMS FOR NONMETALLIC PIPE, CONDUIT, OR TUBING (FS-4): COMPLY WITH THE FOLLOWING:
1. ACCEPTABLE UL-CLASSIFIED SYSTEMS WITH CAJ, FA, OR WL 1000 SERIES SYSTEMS, EQUIVALENT TO, BUT NOT LIMITED TO, THE FOLLOWING: CAJ1109, FA2053, WL2078, WL2139 BY HILTI OR CAJ2212, CAJ2171, CAJ2310, WL2167, WL2186, WL2170, WL2259 BY GRACE.
2. TYPE OF FILL MATERIALS: ONE OR MORE OF THE FOLLOWING:
a. INTUMESCENT SEALANT,
b. INTUMESCENT PUTTY.
c. INTUMESCENT WRAP STRIPS.
d. FIRESTOP DEVICE.
e. FIRESTOP SLEEVE DEVICE,
f. LATEX SEALANT.
H. FIRESTOP SYSTEMS FOR ELECTRICAL CABLES (FS-5): COMPLY WITH THE FOLLOWING:
1. ACCEPTABLE UL-CLASSIFIED SYSTEMS WITH CAJ, FC, OR WL 3000 SERIES SYSTEMS, EQUIVALENT TO, BUT NOT LIMITED TO, THE FOLLOWING: CAJ3366, FC3012, WL3063, WL3112 BY HILTI OR CAJ3186, CAJ3199, CAJ3254, FC3018, FC3060, WL3179 BY GRACE.
2. TYPE OF FILL MATERIALS: ONE OR MORE OF THE FOLLOWING:
a. INTUMESCENT SEALANT.
b. LATEX SEALANT
c. PILLOWS/BAGS
d. INTUMESCENT PUTTY.
e. SILICONE FOAM.
I. FIRESTOP SYSTEMS FOR CABLE TRAYS (FS-6): COMPLY WITH THE FOLLOWING:
1. ACCEPTABLE UL-CLASSIFIED SYSTEMS WITH CAJ OR WL 4000 SERIES SYSTEMS EQUIVALENT TO, BUT NOT LIMITED TO, THE FOLLOWING: CAJ4035, CAJ4054, WL4011, WL4034 BY HILTI OR CAJ4033, CEJ4623, WL4025, WL4033 BY GRACE.
2. TYPE OF FILL MATERIALS: ONE OR MORE OF THE FOLLOWING:
a. INTUMESCENT SEALANT.
b. INTUMESCENT PUTTY.
c. SILICONE FOAM.
d. PILLOWSBAGS.
e. DAM BLOCKS.
f. FIRESTOP MORTAR.
g. POLYURETHANE FIRESTOP FOAM.

07 84 13 - PENETRATION FIRESTOPPING (CONT)

J. FIRESTOP SYSTEMS FOR INSULATED PIPES (FS-7): COMPLY WITH THE FOLLOWING:
1. ACCEPTABLE UL-CLASSIFIED SYSTEMS WITH CAJ OR WL 3000 SERIES SYSTEMS, EQUIVALENT TO, BUT NOT LIMITED TO, THE FOLLOWING: CAJ3691, WL3629 BY HILTI OR CAJ3222, WL3171 BY GRACE.
2. TYPE OF FILL MATERIALS: ONE OR MORE OF THE FOLLOWING:
a. INTUMESCENT SEALANT.
b. SILICONE FOAM.
c. INTUMESCENT WRAP STRIPS.
d. PRE-FORMED INTUMESCENT BLOCKS.
K. FIRESTOP SYSTEMS FOR MISCELLANEOUS ELECTRICAL PENETRANTS (FS-8): COMPLY WITH THE FOLLOWING:
1. ACCEPTABLE UL-CLASSIFIED SYSTEMS WITH CAJ 4000 SERIES SYSTEMS EQUIVALENT TO, BUT NOT LIMITED TO, THE FOLLOWING: CAJ4069, CAJ 4217 BY HILTI OR CAJ4012, CAJ4013, CAJ4037 BY GRACE.
2. TYPE OF FILL MATERIALS: ONE OR MORE OF THE FOLLOWING:
a. INTUMESCENT SEALANT.
b. LATEX SEALANT
c. INTUMESCENT PUTTY,
d. MORTAR.
L. FIRESTOP SYSTEMS FOR MISCELLANEOUS MECHANICAL PENETRATIONS (FS-9): COMPLY WITH THE FOLLOWING:
1. ACCEPTABLE UL-CLASSIFIED SYSTEMS WITH CAJ 7000 SERIES SYSTEMS EQUIVALENT TO, BUT NOT LIMITED TO, THE FOLLOWING: CAJ7064, CAJ7251, CAJ7049, CAJ7021 BY HILTI OR CAJ7007, CAJ7075, CAJ7182 BY GRACE.
2. TYPE OF FILL MATERIALS: ONE OR BOTH OF THE FOLLOWING:
a. INTUMESCENT SEALANT.
b. LATEX SEALANT
c. MORTAR.
d. ACRYLIC SEALANT.
e. SILICONE SEALANT.
M. FIRESTOP SYSTEMS FOR GROUPINGS OF PENETRATIONS (FS-10): COMPLY WITH THE FOLLOWING:
1. ACCEPTABLE UL-CLASSIFIED SYSTEMS WITH CAJ OR WL 5000 SERIES SYSTEMS, EQUIVALENT TO, BUT NOT LIMITED TO, THE FOLLOWING: CAJ5018, CAJ5028, WJ5027, WL5014, WL5019 BY HILTI OR CAJ5042, CAJ5101, CAJ5133, WL5037 BY GRACE.
2. TYPE OF FILL MATERIALS: ONE OR MORE OF THE FOLLOWING:
a. LATEX SEALANT.
b. MORTAR.
c. INTUMESCENT WRAP STRIPS.
d. FIRESTOP DEVICE.
e. INTUMESCENT COMPOSITE SHEET.
f. PRE-FORMED INTUMESCENT BLOCKS.

07 92 90 - JOINT SEALANTS

1.1 WARRANTY

A. SPECIAL MANUFACTURER'S WARRANTY: MANUFACTURER'S STANDARD FORM IN WHICH JOINT-SEALANT MANUFACTURER AGREES TO FURNISH JOINT SEALANTS TO REPAIR OR REPLACE THOSE THAT DO NOT COMPLY WITH PERFORMANCE AND OTHER REQUIREMENTS SPECIFIED IN THIS SECTION AND SPECIFIED WARRANTY PERIOD.
1. WARRANTY PERIOD: 20 YEARS FROM DATE OF SUBSTANTIAL COMPLETION FOR SILICONE SEALANTS.

1.2 MATERIALS, GENERAL

A. COMPATIBILITY: PROVIDE JOINT SEALANTS, BACKINGS, AND OTHER RELATED MATERIALS THAT ARE COMPATIBLE WITH ONE ANOTHER AND WITH JOINT SUBSTRATES UNDER CONDITIONS OF SERVICE AND APPLICATION, AS DEMONSTRATED BY JOINT-SEALANT MANUFACTURER, BASED ON TESTING AND FIELD EXPERIENCE.
B. LIQUID-APPLIED JOINT SEALANTS: COMPLY WITH ASTM C 920 AND OTHER REQUIREMENTS INDICATED FOR EACH LIQUID-APPLIED JOINT SEALANT SPECIFIED, INCLUDING THOSE REFERENCING ASTM C 920 CLASSIFICATIONS FOR TYPE, GRADE, CLASS, AND USES RELATED TO EXPOSURE AND JOINT SUBSTRATES.
1. SUITABILITY FOR IMMERSION IN LIQUIDS: WHERE SEALANTS ARE INDICATED FOR USE I FOR JOINTS THAT WILL BE CONTINUOUSLY IMMERSED IN LIQUIDS, PROVIDE PRODUCTS THAT HAVE UNDERGONE TESTING ACCORDING TO ASTM E 1247, LIQUID USED FOR TESTING SEALANTS IS DEIONIZED WATER, UNLESS OTHERWISE INDICATED.
C. COLORS OF EXPOSED JOINT SEALANTS: AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE.

1.3 SILICONE JOINT SEALANTS

A. MILDEW-RESISTANT, SINGLE-COMPONENT, ACID-CURING SILICONE JOINT SEALANT (S-S1): ASTM C 920, TYPE S, GRADE NS, CLASS 25, USE NT.
1. PRODUCTS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE ONE OF THE FOLLOWING:
a. BASF BUILDING SYSTEMS: SONOLASTIC,
b. DOW CORNING CORPORATION; THE MILDEW RESISTANT.
c. GE ADVANCED MATERIALS - SILICONES: SANITARY CCS1700.
d. TREMCO INCORPORATED; TREMSIL 200 SANITARY.

1.4 URETHANE JOINT SEALANTS

A. MULTICOMPONENT, SELF-LEVELING, TRAFFIC-GRADE, URETHANE JOINT SEALANT (U-T2): ASTM C 920, TYPE M, GRADE SL, CLASS 50, FOR USE T.
1. PRODUCTS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE ONE OF THE FOLLOWING:
a. POLYMERIC SYSTEMS, INC.; PSI-270.
b. TREMCO INCORPORATED; DYNATHANE 240 FC.
c. PECORA; DYNATREAD.
d. BASF BUILDING SYSTEMS: MASTERSEAL SL-2

1.5 LATEX JOINT SEALANTS

A. LATEX JOINT SEALANT (AU): ACRYLIC LATEX OR SILICONIZED ACRYLIC LATEX, ASTM C 834, TYPE OP, GRADE NF.
1. PRODUCTS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE ONE OF THE FOLLOWING:
a. BASF BUILDING SYSTEMS: SONOLASTIC,
b. GE SEALANTS & ADHESIVES; IDENTITY.
c. MAY NATIONAL ASSOCIATES, INC.
d. PECORA CORPORATION; AC-20+.
e. TREMCO INCORPORATED; TREMPLEX 834.

1.6 ACOUSTICAL JOINT SEALANTS (AC)

A. ACOUSTICAL JOINT SEALANT: MANUFACTURER'S STANDARD NON-SAG, PAINTABLE, NON-STAINING LATEX SEALANT COMPLYING WITH ASTM C 834, PRODUCT EFFECTIVELY REDUCES AIRBORNE SOUND TRANSMISSION THROUGH PERIMETER JOINTS AND OPENINGS IN BUILDING CONSTRUCTIONS AS DEMONSTRATED BY TESTING REPRESENTATIVE ASSEMBLIES ACCORDING TO ASTM E 90.
1. PRODUCTS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE ONE OF THE FOLLOWING:
a. PECORA CORPORATION; AC-20 FTR.
b. USG CORPORATION; SHEETROCK ACOUSTICAL SEALANT.

1.7 MISCELLANEOUS MATERIALS

A. PRIMER: MATERIAL RECOMMENDED BY JOINT-SEALANT MANUFACTURER WHERE REQUIRED FOR ADHESION OF SEALANT TO JOINT SUBSTRATES INDICATED, AS DETERMINED FROM PRECONSTRUCTION JOINT-SEALANT-SUBSTRATE TESTS AND FIELD TESTS.
B. CLEANERS FOR NONPOROUS SURFACES: CHEMICAL CLEANERS ACCEPTABLE TO MANUFACTURERS OF SEALANTS AND SEALANT BACKING MATERIALS, FREE OF OILY RESIDUES OR OTHER SUBSTANCES CAPABLE OF STAINING OR HARMING JOINT SUBSTRATES AND ADJACENT NONPOROUS SURFACES IN ANY WAY, AND FORMULATED TO PROMOTE OPTIMUM ADHESION OF SEALANTS TO JOINT SUBSTRATES.
C. MASKING TAPE: NONSTAINING, NONABSORBENT MATERIAL COMPATIBLE WITH JOINT SEALANTS AND SURFACES ADJACENT TO JOINTS.

1.8 PREPARATION

A. SURFACE CLEANING OF JOINTS: CLEAN OUT JOINTS IMMEDIATELY BEFORE INSTALLING JOINT SEALANTS TO COMPLY WITH JOINT-SEALANT MANUFACTURER'S WRITTEN INSTRUCTIONS AND THE FOLLOWING REQUIREMENTS:
1. REMOVE ALL FOREIGN MATERIAL FROM JOINT SUBSTRATES THAT COULD INTERFERE WITH ADHESION OF JOINT SEALANT, INCLUDING DUST, PAINT, OTHER PROTECTIVE COATINGS TESTED AND APPROVED FOR SEALANT ADHESION AND COMPATIBILITY BY SEALANT MANUFACTURERS, OLD JOINT SEALANTS, AND EXPANSION JOINT.
2. CLEAN NONPOROUS JOINT SUBSTRATE SURFACES WITH CHEMICAL CLEANERS OR OTHER MEANS THAT DO NOT STAIN, HARM SUBSTRATES, OR LEAVE RESIDUES CAPABLE OF INTERFERING WITH ADHESION OF JOINT SEALANTS. NONPOROUS JOINT SUBSTRATES INCLUDE THE FOLLOWING:
a. METAL.
b. GLASS.
c. PORCELAIN ENAMEL.
d. GLAZED SURFACES OF CERAMIC TILE.
B. JOINT PRIMING: PRIME JOINT SUBSTRATES WHERE RECOMMENDED BY JOINT-SEALANT MANUFACTURER OR AS INDICATED BY PRECONSTRUCTION JOINT-SEALANT-SUBSTRATE TESTS OR PRIOR EXPERIENCE. APPLY PRIMER TO COMPLY WITH JOINT-SEALANT MANUFACTURER'S WRITTEN INSTRUCTIONS. CONFINE PRIMERS TO AREAS OF JOINT SEALANT BOND; DO NOT ALLOW SPILLAGE OR MIGRATION ONTO ADJOINING SURFACES.
C. MASKING TAPE: USE MASKING TAPE WHERE REQUIRED TO PREVENT CONTACT OF SEALANT OR PRIMER WITH ADJOINING SURFACES THAT OTHERWISE WOULD BE PERMANENTLY STAINED OR DAMAGED BY SUCH CONTACT OR BY CLEANING METHODS REQUIRED TO REMOVE SEALANT SMEARS. REMOVE TAPE IMMEDIATELY AFTER TOOLING WITHOUT DISTURBING JOINT SEAL.

1.9 INSTALLATION OF JOINT SEALANTS

A. GENERAL: COMPLY WITH JOINT-SEALANT MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS FOR PRODUCTS AND APPLICATIONS INDICATED, UNLESS MORE STRINGENT REQUIREMENTS APPLY.
B. SEALANT INSTALLATION STANDARD: COMPLY WITH RECOMMENDATIONS IN ASTM C 1193 FOR USE OF JOINT SEALANTS AS APPLICABLE TO MATERIALS, APPLICATIONS, AND CONDITIONS INDICATED.
C. INSTALL SEALANT BACKINGS OF KIND INDICATED TO SUPPORT SEALANTS DURING APPLICATION AND AT POSITION REQUIRED TO PRODUCE CROSS-SECTIONAL SHAPES AND DEPTHS OF INSTALLED SEALANTS RELATIVE TO JOINT WIDTHS THAT ALLOW OPTIMUM SEALANT MOVEMENT CAPABILITY.
1. DO NOT LEAVE GAPS BETWEEN ENDS OF SEALANT BACKINGS.
2. DO NOT STRETCH, TWIST, PUNCTURE, OR TEAR SEALANT BACKINGS.
3. REMOVE ABSORBENT SEALANT BACKINGS THAT HAVE BECOME WET BEFORE SEALANT APPLICATION AND REPLACE THEM WITH DRY MATERIALS.
D. INSTALL SEALANTS USING PROVEN TECHNIQUES THAT COMPLY WITH THE FOLLOWING AND AT THE SAME TIME BACKINGS ARE INSTALLED:
1. PLACE SEALANTS SO THEY DIRECTLY CONTACT AND FULLY WET JOINT SUBSTRATES.
2. PRODUCE UNIFORM, CROSS-SECTIONAL SHAPES AND DEPTHS RELATIVE TO JOINT WIDTHS THAT ALLOW OPTIMUM SEALANT MOVEMENT CAPABILITY.
E. TOOLING OF NONSAG SEALANTS: IMMEDIATELY AFTER SEALANT APPLICATION AND BEFORE SKINNING OR CURING BEGINS, TOOL SEALANTS ACCORDING TO REQUIREMENTS SPECIFIED IN SUBPARAGRAPHS BELOW TO FORM SMOOTH, UNIFORM BEADS OF CONFIGURATION INDICATED; TO ELIMINATE AIR POCKETS; AND TO ENSURE CONTACT AND ADHESION OF SEALANT WITH SIDES OF JOINT.
1. REMOVE EXCESS SEALANT FROM SURFACES ADJACENT TO JOINTS.
2. USE TOOLING AGENTS THAT ARE APPROVED IN WRITING BY SEALANT MANUFACTURER AND THAT DO NOT DISCOLOR SEALANTS OR ADJACENT SURFACES.
3. PROVIDE CONCAVE JOINT PROFILE PER FIGURE 8A IN ASTM C 1193, UNLESS OTHERWISE INDICATED.
4. PROVIDE FLUSH JOINT PROFILE WHERE INDICATED PER FIGURE 8B IN ASTM C 1193.

07 92 90 - JOINT SEALANTS (CONT)

F. ACOUSTICAL SEALANT INSTALLATION: AT SOUND-RATED ASSEMBLIES AND ELSEWHERE AS INDICATED, SEAL CONSTRUCTION AT PERIMETERS, BEHIND CONTROL JOINTS, AND AT OPENINGS AND PENETRATIONS WITH A CONTINUOUS BEAD OF ACOUSTICAL SEALANT. INSTALL ACOUSTICAL SEALANT AT BOTH FACES OF PARTITIONS AT PERIMETERS AND THROUGH PENETRATIONS. COMPLY WITH ASTM C 919 AND WITH MANUFACTURER'S WRITTEN RECOMMENDATIONS.

1.10 JOINT-SEALANT SCHEDULE

A. SEALANT SCHEDULE (SEE SEALANT ABBREVIATIONS ABOVE FOR CORRESPONDING PRODUCT):
1. INTERIOR JOINTS:
a. WALL AND CEILING JOINTS SUBJECT TO MOVEMENT: DESIGNATION U-MC.
b. WALL AND CEILING JOINTS NOT SUBJECT TO MOVEMENT: DESIGNATION AL.
c. INTERIOR SIDE OF EXTERIOR WALLS: DESIGNATION U-MC.
d. FLOOR JOINTS: DESIGNATION U-TB.
e. WALL AND CEILING JOINTS BETWEEN FRAMES AND THEIR ROUGH OPENING: DESIGNATION AL.
f. WALL AND CEILING JOINTS BETWEEN FRAMES AND ADJOINING SURFACES: DESIGNATION AL.
g. INTERIOR SANITARY JOINTS: JOINTS BETWEEN PLUMBING FIXTURES AND ADJOINING FLOOR, WALL, AND CEILING SURFACES; JOINTS BETWEEN SHOWER DOOR ENCLOSURE COMPONENTS AND ADJACENT FINISH SURFACES; JOINTS IN DIETARY AND FOOD PREPARATION AREAS, KITCHENS, FOOD STORAGE AREAS, AND AREAS SUBJECT TO FREQUENT WET CLEANING, INCLUDING JOINTS BETWEEN WALLS AND FLOORS. JOINTS BETWEEN BACK SPLASHES AND WALL SUBSTRATES: DESIGNATION S-G.
2. EXTERIOR LOCATIONS:
a. WALL JOINTS:
3. BORDERED ON BOTH SIDES BY POROUS BUILDING MATERIAL (CONCRETE, STONE, MASONRY, CEMENT PLASTER): DESIGNATION G-DP.
4. BORDERED ON BOTH SIDES BY NONAGROUS BUILDING MATERIAL (COATED AND UNCOATED METALS, ANODIZED ALUMINUM, PORCELAIN TILE, AND GLASS): DESIGNATION S-GP.
5. BORDERED ON ONE SIDE BY POROUS BUILDING MATERIAL (CONCRETE, STONE, MASONRY) AND OTHER SIDE BY NON-POROUS BUILDING MATERIAL (COATED AND UNCOATED METALS, ANODIZED ALUMINUM, PORCELAIN TILE, AND GLASS): DESIGNATION S-GP.
a. PERIMETER OF PENETRATIONS THROUGH WALLS: DESIGNATION S-GP
b. EXPANSION JOINTS IN CEILINGS, SOFFITS, AND OVERHEAD SURFACES: DESIGNATION S-GP
c. CONTROL JOINTS AT PERIMETER OF PENETRATIONS IN CEILINGS, SOFFITS, AND OVERHEAD SURFACES: DESIGNATION S-GP.
d. WALL AND CEILING JOINTS BETWEEN FRAMES AND THEIR ROUGH OPENING: DESIGNATION S-GP.
e. WALL AND CEILING JOINTS BETWEEN FRAMES AND ADJOINING SURFACES: DESIGNATION S-GP.
f. JOINTS AND PERIMETER OF PENETRATIONS IN HORIZONTAL PEDESTRIAN AND VEHICLE TRAFFIC SURFACES: DESIGNATION U-TB.

07 95 13.13 - INTERIOR EXPANSION JOINT COVER ASSEMBLIES

1.1 SUMMARY

A. SECTION INCLUDES INTERIOR EXPANSION JOINT COVER ASSEMBLIES.

1.2 ACTION SUBMITTALS

A. PRODUCT DATA: FOR EACH TYPE OF PRODUCT.
B. SHOP DRAWINGS: FOR EACH EXPANSION JOINT COVER ASSEMBLY.
1. INCLUDE PLANS, ELEVATIONS, SECTIONS, DETAILS, SPLICES, BLOCK-OUT REQUIREMENT, ATTACHMENTS TO OTHER WORK, AND LINE DIAGRAMS AND A TABULAR SCHEDULE OF EXPANSION JOINT COVER ASSEMBLIES.
C. SAMPLES: FOR EACH EXPOSED EXPANSION JOINT COVER ASSEMBLY AND FOR EACH COLOR AND TEXTURE SPECIFIED.

1.3 ASSEMBLY DESCRIPTION

A. FURNISH UNITS IN LONGEST PRACTICABLE LENGTHS TO MINIMIZE FIELD SPLICING.
B. INCLUDE FACTORY-FABRICATED CLOSURE MATERIALS AND TRANSITION PIECES, T-JOINTS, CORNERS, CURBS, CROSS-CONNECTIONS, AND OTHER ACCESSORIES AS REQUIRED TO PROVIDE CONTINUOUS EXPANSION JOINT COVER ASSEMBLIES.

1.4 PERFORMANCE REQUIREMENTS

A. SEISMIC PERFORMANCE: EXPANSION JOINT COVER ASSEMBLIES SHALL WITHSTAND THE EFFECTS OF EARTHQUAKE MOTIONS DETERMINED ACCORDING TO ASCE/SEI 7.
B. FIRE-RESISTANCE RATING: PROVIDE EXPANSION JOINT COVER ASSEMBLIES WITH FIRE BARRIERS IDENTICAL TO THOSE OF SYSTEMS TESTED FOR FIRE RESISTANCE ACCORDING TO UL 2079 OR ASTM E 1966 BY A QUALIFIED TESTING AGENCY.
1. HOSE STREAM TEST: WALL-TO-WALL AND WALL-TO-CEILING ASSEMBLIES SHALL BE SUBJECTED TO HOSE STREAM TESTING.
C. C, EXPANSION JOINT DESIGN CRITERIA:
1. TYPE OF MOVEMENT: THERMAL.
a. NOMINAL JOINT WIDTH: AS INDICATED IN DRAWINGS,
b. MINIMUM JOINT WIDTH: AS INDICATED IN DRAWINGS,
c. MAXIMUM JOINT WIDTH: AS INDICATED IN DRAWINGS.
2. TYPE OF MOVEMENT: SEISMIC.
a. JOINT MOVEMENT: AS INDICATED IN DRAWINGS.

1.5 FLOOR EXPANSION JOINT COVERS

A. METAL-PLATE FLOOR JOINT COVER: METAL COVER PLATE FIXED ON ONE SIDE OF JOINT GAP AND FREE TO SLIDE ON OTHER.
1. APPLICATION: FLOOR-TO-FLOOR AND FLOOR-TO-WALL AS INDICATED IN DRAWINGS.
2. INSTALLATION: SURFACE MOUNTED.
3. LOAD CAPACITY:
a. UNIFORM LOAD: 50 LBSQ./FT. INSERT LOAD.
b. CONCENTRATED LOAD: 300 LB INSERT LOAD.
c. MAXIMUM DEFLECTION: 0.0625 INCH.
4. FIRE-RESISTANCE RATING: NOT LESS THAN THAT INDICATED ON DRAWINGS.
5. COVER-PLATE DESIGN: PLAIN.
6. EXPOSED METAL:
a. ALUMINUM: CLEAR ANODIC, CLASS I.
B. CENTER-PLATE FLOOR JOINT COVER: ASSEMBLY CONSISTING OF CENTER PLATE THAT SLIDES OVER METAL FRAMES FIXED TO SIDES OF JOINT GAPS.
1. APPLICATION: FLOOR TO FLOOR AND FLOOR TO WALL.
2. INSTALLATION: SURFACE MOUNTED, RECESSED, AND NO BUMP AS INDICATED IN DRAWINGS.
3. LOAD CAPACITY:
a. UNIFORM LOAD: 50 LBSQ. FT.
b. CONCENTRATED LOAD: 300 LB.
c. MAXIMUM DEFLECTION: 0.0625 INCH.
4. FIRE-RESISTANCE RATING: NOT LESS THAN THAT INDICATED ON DRAWINGS.
5. COVER-PLATE DESIGN: PLAIN.
6. EXPOSED METAL:
a. ALUMINUM: CLEAR ANODIC, CLASS I.
C. CLOS-PLATE FLOOR JOINT COVER: ASSEMBLY CONSISTING OF CENTER PLATE THAT SLIDES IN AND OUT OF SLOTS IN METAL FRAMES FIXED TO SIDES OF JOINT GAP.
1. APPLICATION: FLOOR TO FLOOR AND FLOOR TO WALL AS INDICATED IN DRAWINGS.
2. INSTALLATION: SURFACE MOUNTED, RECESSED, AND NO BUMP AS INDICATED IN DRAWINGS.
3. LOAD CAPACITY:
a. UNIFORM LOAD: 50 LBSQ. FT.
b. CONCENTRATED LOAD: 300 LB.
c. MAXIMUM DEFLECTION: 0.0625 INCH.
4. FIRE-RESISTANCE RATING: NOT LESS THAN THAT INDICATED ON DRAWINGS.
5. COVER-PLATE DESIGN: PLAIN.
6. EXPOSED METAL:
a. ALUMINUM: CLEAR ANODIC, CLASS I.

1.6 WALL EXPANSION JOINT COVERS

A. METAL-PLATE WALL JOINT COVER: METAL COVER PLATE FIXED ON ONE SIDE OF JOINT GAP AND FREE TO SLIDE ON OTHER.
1. APPLICATION: WALL TO WALL AND WALL TO CORNER AS INDICATED IN DRAWINGS.
2. FIRE-RESISTANCE RATING: NOT LESS THAN THAT INDICAT

CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCE

08 11 13 - HOLLOW METAL DOORS AND FRAMES (CONT)

1.6 INSTALLATION

A. INSTALL IN ACCORDANCE WITH THE REQUIREMENTS OF THE SPECIFIED DOOR GRADE STANDARD AND NAAMM HMMA 840.
B. IN ADDITION, INSTALL FIRE-RATED UNITS IN ACCORDANCE WITH NFPA 80.
C. COORDINATE FRAME ANCHOR PLACEMENT WITH WALL CONSTRUCTION.
D. COORDINATE INSTALLATION OF HARDWARE.
E. COORDINATE INSTALLATION OF GLAZING.
F. COORDINATE INSTALLATION OF ELECTRICAL CONNECTIONS TO ELECTRICAL HARDWARE ITEMS.

1.8 TOLERANCES

A. CLEARANCES BETWEEN DOOR AND FRAME: AS SPECIFIED IN ANSI A250.8.
B. MAXIMUM DIAGONAL DISTORTION: 1/16 IN MEASURED WITH STRAIGHT EDGE, CORNER TO CORNER.

1.10 ADJUSTING

A. ADJUST FOR SMOOTH AND BALANCED DOOR MOVEMENT.

08 36 13 - SECTIONAL DOORS

1.1 PERFORMANCE REQUIREMENTS

A. GENERAL PERFORMANCE: SECTIONAL DOORS SHALL MEET PERFORMANCE REQUIREMENTS SPECIFIED WITHOUT FAILURE DUE TO DEFECTIVE MANUFACTURE, FABRICATION, INSTALLATION, OR OTHER DEFECTS IN CONSTRUCTION AND WITHOUT REQUIRING TEMPORARY INSTALLATION OF REINFORCING COMPONENTS.
B. STRUCTURAL PERFORMANCE: EXTERIOR SECTIONAL DOORS SHALL WITHSTAND THE EFFECTS OF GRAVITY LOADS, AND THE FOLLOWING LOADS AND STRESSES WITHIN LIMITS AND UNDER CONDITIONS INDICATED ACCORDING TO ASCE/SEI:
   1. DESIGN WIND LOADS: AS INDICATED ON STRUCTURAL DRAWINGS OR AS OTHERWISE DETERMINED USING DESIGN WIND LOADS APPLICABLE TO PROJECT FROM BASIC WIND SPEED INDICATED IN MILES PER HOUR, ACCORDING TO ASCE 7, SECTION 6.5, "METHOD 2-ANALYTICAL PROCEDURE".
   2. DEFLECTION LIMITS: DESIGN SECTIONAL DOORS TO WITHSTAND DESIGN WIND LOADS WITHOUT EVIDENCING PERMANENT DEFORMATION OR DISENGAGEMENT OF DOOR COMPONENTS. DEFLECTION OF DOOR IN HORIZONTAL POSITION (OPEN) SHALL NOT EXCEED 1/120 OF THE DOOR WIDTH.

1.2 SUBMITTALS

A. PRODUCT DATA: FOR EACH TYPE AND SIZE OF SECTIONAL DOOR AND ACCESSORY. INCLUDE THE FOLLOWING:
B. CONSTRUCTION DETAILS, MATERIAL DESCRIPTIONS, DIMENSIONS OF INDIVIDUAL COMPONENTS, PROFILE DOOR SECTIONS, AND FINISHES.
C. RATED CAPACITIES, OPERATING CHARACTERISTICS, ELECTRICAL CHARACTERISTICS, AND FURNISHED ACCESSORIES.

1.3 DOOR SECTIONS

A. EXTERIOR SECTION FACES AND FRAMES: FABRICATE FROM ZINC-COATED (GALVANIZED), COLD-ROLLED, COMMERCIAL STEEL (CS) SHEET, COMPLYING WITH ASTM A 653, WITH INDICATED ZINC COATING AND THICKNESS.
B. SECTION ENDS AND INTERMEDIATE STILES: ENCLOSE OPEN ENDS OF SECTIONS WITH CHANNEL END STILES FORMED FROM GALVANIZED-STEEL SHEET NOT LESS THAN 0.064INCH (1.63-MM) NOMINAL COATED THICKNESS AND WELDED TO DOOR SECTION. PROVIDE INTERMEDIATE STILES FORMED FROM NOT LESS THAN 2.064INCH (1.63-MM) THICK GALVANIZED-STEEL SHEET, CUT TO DOOR SECTION PROFILE, AND WELDED IN PLACE. SPACE STILES NOT MORE THAN 48 INCHES (1219 MM) APART.
C. REINFORCE BOTTOM SECTION WITH A CONTINUOUS CHANNEL OR ANGLE CONFORMING TO BOTTOM-SECTION PROFILE AND ALLOWING INSTALLATION OF ASTRAGAL.
D. REINFORCE SECTIONS WITH CONTINUOUS HORIZONTAL AND DIAGONAL REINFORCEMENT, AS REQUIRED TO STIFFEN DOOR AND FOR WIND LOADING. PROVIDE GALVANIZED-STEEL BARS, STRUTS, TRUSSES, OR STRIP STEEL FORMED TO DEPTH AND HOLTED OR WELDED IN PLACE. ENSURE THAT REINFORCEMENT DOES NOT OBSTRUCT VISION LITES.
E. PROVIDE REINFORCEMENT FOR HARDWARE ATTACHMENT.

1.4 TRACKS, SUPPORTS, AND ACCESSORIES

A. TRACKS: MANUFACTURER'S STANDARD, GALVANIZED-STEEL TRACK SYSTEM OF CONFIGURATION INDICATED, SIZED FOR DOOR SIZE AND WEIGHT, DESIGNED FOR LIFT TYPE INDICATED AND CLEARANCES SHOWN ON DRAWINGS, AND COMPLYING WITH ASTM A 653 FOR MINIMUM G90 (Z180) ZINC COATING. PROVIDE COMPLETE TRACK ASSEMBLY INCLUDING BRACKETS AND REINFORCEMENT FOR RIGID SUPPORT OF BALL-BEARING ROLLER GUIDES FOR REQUIRED DOOR TYPE AND SIZE. SLOT VERTICAL SECTIONS OF TRACK SPACED 2 INCHES (51 MM) APART FOR PROPER SAFETY DEVICE. SLOPE TRACKS AT PROPER ANGLE FROM VERTICAL OR DESIGN TRACKS TO ENSURE TIGHT CLOSURE AT JAMBS WHEN DOOR UNIT IS CLOSED.
B. TRACK REINFORCEMENT AND SUPPORTS: GALVANIZED-STEEL TRACK REINFORCEMENT AND SUPPORT MEMBERS, COMPLYING WITH ASTM A 36 AND ASTM A 123. SECURE REINFORCE, AND SUPPORT TRACKS AS REQUIRED FOR DOOR SIZE AND WEIGHT TO PROVIDE STRENGTH AND RIGIDITY WITHOUT SAG, SWAY, AND VIBRATION DURING OPENING AND CLOSING OF DOORS.
C. HORIZONTAL TRACK ASSEMBLY: TRACK WITH CONTINUOUS REINFORCING ANGLE ATTACHED TO TRACK AND SUPPORTED AT POINTS FROM CURVE IN TRACK TO END OF TRACK BY LATERALLY BRACED ATTACHMENTS TO OVERHEAD STRUCTURAL MEMBERS.
D. WEATHERSEALS: REPLACEABLE, ADJUSTABLE, CONTINUOUS, COMPRESSIBLE WEATHER-STRIPPING GASKETS OF FLEXIBLE VINYL, RUBBER, OR NEOPRENE FITTED TO BOTTOM AND TOP OF SECTIONAL DOOR UNLESS OTHERWISE INDICATED.
E. WINDOWS: MANUFACTURER'S STANDARD INSULATED UNITS OF TYPE AND SIZE INDICATED AND IN ARRANGEMENT SHOWN. SET GLAZING IN VINYL, RUBBER, OR NEOPRENE GLAZING CHANNEL FOR METAL-FRAMED DOORS AND ELASTIC GLAZING COMPOUND FOR WOOD DOORS, AS REQUIRED. PROVIDE REMOVABLE STOPS OF SAME MATERIAL AS DOOR-SECTION FRAMES.

08 36 13 - SECTIONAL DOORS (CONT)

1.5 HARDWARE

A. GENERAL: PROVIDE HEAVY-DUTY, CORROSION-RESISTANT HARDWARE, WITH HOT-DIP GALVANIZED, STAINLESS-STEEL, OR OTHER CORROSION-RESISTANT FASTENERS, TO SUIT DOOR TYPE.
B. HINGES: HEAVY-DUTY, GALVANIZED-STEEL HINGES OF NOT LESS THAN 0.079INCH- (2.01-MM-) NOMINAL COATED THICKNESS AT EACH END STILE AND AT EACH INTERMEDIATE STILE, ACCORDING TO MANUFACTURER'S WRITTEN RECOMMENDATIONS FOR DOOR SIZE. ATTACH HINGES TO DOOR SECTIONS THROUGH STILES AND RAILS WITH BOLTS AND LOCK NUTS OR LOCK WASHERS AND NUTS. USE RIVETS OR SELF-TAPPING FASTENERS WHERE ACCESS TO NUTS IS NOT POSSIBLE. PROVIDE DOUBLE-END HINGES WHERE REQUIRED, FOR DOORS OVER 16 FEET (4.88 M) WIDE UNLESS OTHERWISE RECOMMENDED BY DOOR MANUFACTURER.
C. ROLLERS: HEAVY-DUTY ROLLERS WITH STEEL BALL BEARINGS IN CASE-HARDENED STEEL RACES, MOUNTED WITH VARYING PROJECTIONS TO SUIT SLOPE OF TRACK. EXTEND ROLLER SHAFT THROUGH BOTH HINGES WHERE DOUBLE HINGES ARE REQUIRED. PROVIDE 3-INCH- (75-MM-) DIAMETER ROLLER TIRES FOR 3-INCH- (76-MM-) WIDE TRACK AND 3-INCH- (5-1/4-MM-) DIAMETER ROLLER TIRES FOR 2-INCH- (51-MM-) WIDE TRACK.
D. PUSH/PULL HANDLES: FOR PUSH-UP OR EMERGENCY-OPERATED DOORS, PROVIDE GALVANIZED-STEEL LIFTING HANDLES ON EACH SIDE OF DOOR.

1.6 LOCKING DEVICES

A. SLIDE BOLT: FABRICATE WITH SIDE-LOCKING BOLTS TO ENGAGE THROUGH SLOTS IN TRACKS FOR LOCKING BY PADLOCK LOCATED ON SINGLE-JAMB SIDE, OPERABLE FROM INSIDE ONLY.
B. SAFETY INTERLOCK SWITCH: EQUIP POWER-OPERATED DOORS WITH SAFETY INTERLOCK SWITCH TO DISENGAGE POWER SUPPLY WHEN DOOR IS LOCKED.

1.7 COUNTERBALANCE MECHANISM

A. TORSION SPRING: COUNTERBALANCE MECHANISM CONSISTING OF ADJUSTABLE-TENSION TORSION SPRINGS FABRICATED FROM STEEL-SPRING WIRE COMPLYING WITH ASTM A 229, MOUNTED ON TORSION SHAFT MADE OF STEEL TUBE OR SOLID STEEL. PROVIDE SPRINGS DESIGNED FOR NUMBER OF OPERATION CYCLES INDICATED.
B. CABLE DRUMS AND SHAFT FOR DOORS: CAST ALUMINUM OR GRAY-IRON CASTING CABLE DRUMS MOUNTED ON TORSION SHAFT AND GROOVED TO RECEIVE DOOR-LIFTING CABLES AS DOOR IS RAISED. MOUNT COUNTERBALANCE MECHANISM WITH MANUFACTURER'S STANDARD BALL-BEARING BRACKETS AT EACH END OF TORSION SHAFT. PROVIDE ONE ADDITIONAL MIDPOINT BRACKET FOR SHAFTS UP TO 16 FEET LONG AND TWO ADDITIONAL BRACKETS AT ONE-THIRD POINTS TO SUPPORT SHAFTS MORE THAN 16 FEET LONG UNLESS CLOSER SPACING IS RECOMMENDED BY DOOR MANUFACTURER.
C. CABLES: GALVANIZED-STEEL LIFTING CABLES WITH CABLE SAFETY FACTOR OF AT LEAST 5 TO 1.
D. BRACKET: PROVIDE ANCHOR SUPPORT BRACKET AS REQUIRED TO CONNECT STATIONARY END OF SPRING TO THE WALL AND TO LEVEL THE SHAFT AND PREVENT SAG.
E. PROVIDE A SPRING BUMPER AT EACH HORIZONTAL TRACK TO CUSHION DOOR AT END OF OPENING OPERATION.

1.8 DOOR ASSEMBLY

A. SECTIONAL DOOR: SECTIONAL DOOR FORMED WITH HINGED SECTIONS.
   1. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:
      a. CLOPAY BUILDING PRODUCTS; A GRIFFON COMPANY.
      b. OVERHEAD DOOR CORPORATION.
      c. REPUBLIC DOORS.
      d. HAAS.
      e. RAYNOR.
B. OPERATION CYCLES: NOT LESS THAN 20,000.
C. TRACK CONFIGURATION: HIGH LIFT.
D. WEATHERSEALS: FITTED TO BOTTOM AND TOP AND AROUND ENTIRE PERIMETER OF DOOR.
E. ROLLER: TYPE AS MATERIAL MANUFACTURER'S STANDARD.
F. LOCKING DEVICE ASSEMBLY: SINGLE-JAMB SIDE LOCKING BARS, OPERABLE FROM INSIDE WITH THUMBTURN.
G. COUNTERBALANCE TYPE: TORSION SPRING.
H. DOOR FINISH: AS SELECTED BY ARCHITECT.
I. PROVIDE DOORS WITH EXHAUST PORT HOLES WHERE REQUIRED FOR EXHAUSTING VEHICLES.

1.9 GENERAL FINISH REQUIREMENTS

A. DOOR FRAME FINISH: AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL AVAILABLE RANGE.

1.10 INSTALLATION

A. INSTALL SECTIONAL DOORS AND OPERATING EQUIPMENT COMPLETE WITH NECESSARY HARDWARE, ANCHORS, INSERTS, HANGERS, AND EQUIPMENT SUPPORTS; ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS AND AS SPECIFIED.
B. TRACKS:
   1. FASTEN VERTICAL TRACK ASSEMBLY TO OPENING JAMBS AND FRAMING, SPACED NOT MORE THAN 24 INCHES APART.
   2. HANG HORIZONTAL TRACK ASSEMBLY FROM STRUCTURAL OVERHEAD FRAMING WITH ANGLES OR CHANNEL HANGERS ATTACHED TO FRAMING BY WELDING OR BOLTING, OR BOTH. PROVIDE SWAY BRACING, DIAGONAL BRACING, AND REINFORCEMENT AS REQUIRED FOR RIGID INSTALLATION OF TRACK AND DOOR-OPERATING EQUIPMENT.
   3. REPAIR GALVANIZED COATING ON TRACKS ACCORDING TO ASTM A 780.
C. ACCESSIBILITY: INSTALL SECTIONAL DOORS, SWITCHES, AND CONTROLS ALONG ACCESSIBLE ROUTES IN COMPLIANCE WITH REGULATORY REQUIREMENTS FOR ACCESSIBILITY.

1.11 ADJUSTING

A. ADJUST HARDWARE AND MOVING PARTS TO FUNCTION SMOOTHLY SO THAT DOORS OPERATE EASILY, FREE OF WARP, TWIST, OR DISTORTION.
B. LUBRICATE BEARINGS AND GUIDING PARTS AS RECOMMENDED BY MANUFACTURER.
C. ADJUST DOORS AND SEALS TO PROVIDE WEATHERTIGHT FIT AROUND ENTIRE PERIMETER.
D. ALIGN AND ADJUST MOTORS, PULLEYS, BELTS, SPROCKETS, CHAINS, AND CONTROLS ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.

08 43 13 - ALUMINUM-FRAMED STOREFRONTS

1.1 SUBMITTALS

A. PRODUCT DATA: PROVIDE COMPONENT DIMENSIONS, DESCRIBE COMPONENTS WITHIN ASSEMBLY, ANCHORAGE AND FASTENERS, GLASS AND INFILL, DOOR HARDWARE, INTERNAL DRAINAGE DETAILS.
B. SHOP DRAWINGS: PROVIDE ENGINEERED, SEALED SHOP DRAWINGS INDICATING SYSTEM DIMENSIONS, FRAMED OPENING REQUIREMENTS AND TOLERANCES, AFFECTED RELATED WORK, EXPANSION AND CONTRACTION JOINT LOCATION AND DETAILS, AND FIELD WELDING REQUIRED.

1.2 MANUFACTURERS

A. A. ACCEPTABLE MANUFACTURERS:
   1. YKK AP AMERICA INC.: WWW.YKKAP.COM.
   2. KAWNEER NORTH AMERICA: WWW.KAWNEER.COM.
   3. UNITED STATES ALUMINUM CORP.: WWW.USALUM.COM.
   4. OLDCASTLE BUILDING ENVELOPE PRODUCTS: WWW.OLDCASTLEBE.COM
   5. ARCADI: WWW.ARCADIA.COM
   6. OTHERS APPROVED AS EQUAL

1.3 STOREFRONT

A. ALUMINUM-FRAMED STOREFRONT: FACTORY FABRICATED, FACTORY FINISHED ALUMINUM FRAMING MEMBERS WITH INFILL, AND RELATED FLASHINGS, ANCHORAGE AND ATTACHMENT DEVICES.
   1. GLAZING RABBET: FOR 1 INCH INSULATING GLAZING.
   2. GLAZING POSITION: CENTER-SET.
   3. VERTICAL MULLION DIMENSIONS: 2 INCHES WIDE BY 4-1/2 INCHES DEEP.
   4. WATER LEAKAGE TEST PRESSURE DIFFERENTIAL: 2.86 LBF/SQ FT.
   5. AIR INFILTRATION TEST PRESSURE DIFFERENTIAL: 1.57 PSF.
   6. CONDENSATION RESISTANCE FACTOR: 40 MINIMUM.
B. PERFORMANCE REQUIREMENTS:
   1. DESIGN AND SIZE COMPONENTS TO WITHSTAND THE SPECIFIED LOAD REQUIREMENTS WITHOUT DAMAGE OR PERMANENT SET, WHEN TESTED IN ACCORDANCE WITH ASTM E330, USING LOADS 1.5 TIMES THE DESIGN WIND LOADS AND 10 SECOND DURATION OF MAXIMUM LOAD.
      a. MEMBER DEFLECTION: LIMIT MEMBER DEFLECTION TO FLEXURE LIMIT OF GLASS IN ANY DIRECTION, WITH FULL RECOVERY OF GLAZING MATERIALS.
   2. MOVEMENT: ACCOMMODATE MOVEMENT BETWEEN STOREFRONT AND PERIMETER FRAMING AND DEFLECTION OF LINTEL, WITHOUT DAMAGE TO COMPONENTS OR DETERIORATION OF SEALS.
   3. SYSTEM INTERNAL DRAINAGE: DRAIN TO THE EXTERIOR BY MEANS OF A WEEP DRAINAGE NETWORK ANY WATER ENTERING JOINTS, CONDENSATION OCCURRING IN GLAZING CHANNEL, AND MOISTURE OCCURRING WITHIN SYSTEM.
   4. EXPANSION/CONTRACTION: PROVIDE FOR EXPANSION AND CONTRACTION WITHIN SYSTEM COMPONENTS CAUSED BY CYCLING TEMPERATURE RANGE OF 170 DEGREES F OVER A 12 HOUR PERIOD WITHOUT CAUSING DETRIMENTAL EFFECT TO SYSTEM COMPONENTS, ANCHORAGES, AND OTHER BUILDING ELEMENTS.

08 43 13 - ALUMINUM-FRAMED STOREFRONTS (CONT)

1.4 COMPONENTS

A. ALUMINUM FRAMING MEMBERS: TUBULAR ALUMINUM SECTIONS, THERMALLY BROKEN WITH INTERIOR SECTION INSULATED FROM EXTERIOR, DRAINAGE HOLES AND INTERNAL WEEP DRAINAGE SYSTEM.
   1. GLAZING STOPS: FLUSH.
   2. STRUCTURALLY REINFORCED MEMBERS: EXTRUDED ALUMINUM WITH INTERNAL REINFORCEMENT OF STRUCTURAL STEEL MEMBER.
   3. SUBRAILS: PROVIDE MANUFACTURER'S STANDARD SUBRAILS FOR ALL STOREFRONT FRAMING.
B. DOORS: GLAZED ALUMINUM, HEAVY DUTY (1-3/4 INCH WALL THICKNESS; WITH FULLY WELDED INTERNAL JOINTS).
   1. THICKNESS: 1-3/4 INCHES.
   2. TOP RAIL: 4 INCHES WIDE.
   3. VERTICAL STILES: 4-1/2 INCHES WIDE.
   4. BOTTOM RAIL: 10 INCHES WIDE.
   5. GLAZING STOPS: SQUARE.
   6. FINISH: SAME AS STOREFRONT.

1.5 MATERIALS

A. EXTRUDED ALUMINUM: ASTM B221 (ASTM B221M).
B. FASTENERS: STAINLESS STEEL.
C. CONCEALED FLASHINGS: 0.018 INCH THICK GALVANIZED STEEL.
D. PERIMETER SEALANT: TYPE G-NP SPECIFIED IN SECTION 07 9005.
E. GLASS: AS SPECIFIED IN SECTION 088000.
F. GLAZING GASKETS: TYPE TO SUIT APPLICATION TO ACHIEVE WEATHER, MOISTURE, AND AIR INFILTRATION REQUIREMENTS.
G. GLAZING ACCESSORIES: AS SPECIFIED IN SECTION 088000.

1.6 FINISHES

A. REFER TO FINISH LEGEND IN DRAWINGS.

1.7 HARDWARE

A. DOOR HARDWARE: REFER TO DRAWINGS.
B. WEATHERSTRIPPING: WOOL PILE, CONTINUOUS AND REPLACEABLE; PROVIDE ON ALL DOORS.
C. SILL SWEEP STRIPS: RESILIENT SEAL TYPE, RETRACTING, OR NEOPRENE; PROVIDE ON ALL DOORS.

1.8 FABRICATION

A. FABRICATE COMPONENTS WITH MINIMUM CLEARANCES AND SHIM SPACING AROUND PERIMETER OF ASSEMBLY, YET ENABLING INSTALLATION AND DYNAMIC MOVEMENT OF PERIMETER SEAL.
B. ACCURATELY FIT AND SECURE JOINTS AND CORNERS. MAKE JOINTS FLUSH, HAIRLINE, AND WEATHERPROOF.
C. PREPARE COMPONENTS TO RECEIVE ANCHOR DEVICES. FABRICATE ANCHORS.
D. COAT CONCEALED METAL SURFACES THAT WILL BE IN CONTACT WITH CEMENTITIOUS MATERIALS OR DISSIMILAR METALS WITH BITUMINOUS PAINT.
E. ARRANGE FASTENERS AND ATTACHMENTS TO CONCEAL FROM VIEW.
F. REINFORCE COMPONENTS INTERNALLY FOR DOOR HARDWARE.
G. REINFORCE FRAMING MEMBERS FOR IMPOSED LOADS.
H. FINISHING: APPLY FACTORY FINISH TO ALL SURFACES THAT WILL BE EXPOSED IN COMPLETED ASSEMBLIES.
   1. TOUCHUP SURFACE DAMAGE DURING FABRICATION SO THAT NO NATURAL ALUMINUM IS VISIBLE IN COMPLETED ASSEMBLIES, INCLUDING JOINT EDGES.

1.9 INSTALLATION

A. INSTALL WALL SYSTEM IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
B. ATTACH TO STRUCTURE TO PERMIT SUFFICIENT ADJUSTMENT TO ACCOMMODATE CONSTRUCTION TOLERANCES AND OTHER IRREGULARITIES.
C. PROVIDE ALIGNMENT ATTACHMENTS AND SHIMS TO PERMANENTLY FASTEN SYSTEM TO BUILDING STRUCTURE.
D. ALIGN ASSEMBLY PLUMB AND LEVEL, FREE OF WARP OR TWIST. MAINTAIN ASSEMBLY DIMENSIONS, TOLERANCES, ALIGNING WITH ADJACENT WORK.
E. PROVIDE THERMAL ISOLATION WHERE COMPONENTS PENETRATE OR DISRUPT BUILDING INSULATION.
F. INSTALL SILL FLASHINGS, TURN UP ENDS AND EDGES; SEAL TO ADJACENT WORK TO FORM WATERTIGHT DAM.
G. WHERE FASTENERS PENETRATE SILL FLASHINGS, MAKE WATERTIGHT BY SEATING AND SEALING FASTENER HEADS TO SILL FLASHING.
H. COORDINATE ATTACHMENT AND SEAL OF PERIMETER AIR AND VAPOR BARRIER MATERIALS.
I. FILL DIM SPACES WITH LOW RISE URETHANE FOAM SEALANT AT PERIMETER OF ASSEMBLY TO MAINTAIN CONTINUITY OF THERMAL BARRIER.
J. SET THRESHOLDS IN BED OF MASTIC AND SECURE.
K. INSTALL HARDWARE USING TEMPLATES PROVIDED.
L. INSTALL GLASS AND INFILL PANELS IN ACCORDANCE WITH SECTION 088000, USING GLAZING METHOD REQUIRED TO ACHIEVE PERFORMANCE CRITERIA.
M. TOUCHUP MINOR DAMAGE TO FACTORY APPLIED FINISH; REPLACE COMPONENTS THAT CANNOT BE SATISFACTORILY REPAIRED.

1.10 TOLERANCES

A. MAXIMUM VARIATION FROM PLUMB: 1/64 INCHES EVERY 3 FT NON-CUMULATIVE OR 1/16 INCHES PER 10 FT, WHICHEVER IS LESS.
B. MAXIMUM MEASUREMENT OF TWO ADJOINING MEMBERS ABUTTING IN PLANE: 1/32 INCH.

1.11 ADJUSTING

A. ADJUST OPERATING HARDWARE AND SASH FOR SMOOTH OPERATION.

State of Illinois Design Firm Registration No. 184-005609
WARE MALCOMB
ARCHITECTURE CIVIL ENGINEERING PLANNING INTERIORS
3315 North Ridge Avenue
Oak Brook, IL 60523

GRANT A. SMEDLEY
LICENSED ARCHITECT
001-027846
EXP: 11 - 30 - 2022

THE MISSNER GROUP

SPECIFICATIONS

| DATE | REMARKS |
|---|---|
| 2022.03.04 | PROGRESS PACKAGE |
| 2022.04.29 | PERMIT SET |

| | |
|---|---|
| PA/PM: | M. PULA |
| DRAWN BY.: | S.R. |
| JOB NO.: | CH21-3193-0 |

SHEET
A0.41

MISSNER GROUP - PALATINE
2250 NORTH RAND ROAD

Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)

CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCT

08 71 00 - DOOR HARDWARE

1.1 QUALITY ASSURANCE

A. DOOR HARDWARE INSTALLER QUALIFICATIONS: AN EXPERIENCED AND FACTORY TRAINED INSTALLER WHO HAS COMPLETED BOTH STANDARD AND ELECTRIFIED BUILDERS HARDWARE AND INTEGRATED ACCESS CONTROL INSTALLATIONS SIMILAR IN MATERIAL, DESIGN, AND EXTENT TO THAT INDICATED FOR THIS PROJECT AND WHOSE WORK HAS RESULTED IN CONSTRUCTION WITH A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE.
B. DOOR HARDWARE SUPPLIER QUALIFICATIONS: A DOOR HARDWARE SUPPLIER WITH WAREHOUSING FACILITIES IN PROJECTS VICINITY WHICH IS NOT MORE THEN A HALF DAY OF TRAVEL FROM THE JOBSITE AND WHO EMPLOYS A QUALIFIED ARCHITECTURAL HARDWARE CONSULTANT OR EQUIVALENT EXPERIENCE AVAILABLE DURING THE COURSE OF THE WORK TO CONSULT WITH CONTRACTOR, ARCHITECT, AND OWNER ABOUT DOOR HARDWARE AND KEYING. SUPPLIER RECOGNIZED BY MANUFACTURERS TO BE A DIRECT FACTORY-AUTHORIZED DISTRIBUTOR OF THE SPECIFIED HARDWARE PRODUCTS. SUPPLIER IS REQUIRED TO BE AVAILABLE FOR ONSITE MEETINGS WITH TWO DAYS' NOTICE REGARDING ISSUES THAT ARISE WITH OPENING FUNCTIONS, INSTALLATION, KEYING, ON-SITE WAREHOUSING, AND DELIVERY OF PRODUCTS, AND FINAL PUNCH OUT RELATED ISSUES.
C. REGULATORY REQUIREMENTS: COMPLY WITH PROVISIONS OF THE FOLLOWING:
   1. WHERE INDICATED TO COMPLY WITH ACCESSIBILITY REQUIREMENTS, COMPLY WITH "AMERICANS WITH DISABILITIES ACT" (ADA), "ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES (ADAAG)," AND A117.1, 2. NFPA 101: COMPLY WITH THE FOLLOWING FOR HARDWARE ON EXITWAYS DOOR;
   3. APPLICABLE BUILDING CODE: AS INDICATED ON DRAWINGS.
D. FIRE-RATED DOOR ACCESSIBILITY: FURNISH DOOR HARDWARE FOR ASSEMBLIES COMPLYING WITH NFPA 80 THAT ARE LISTED AND LABELED BY A TESTING AND INSPECTING AGENCY ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION FOR FIRE RATINGS INDICATED, BASED ON TESTING ACCORDING TO NFPA 252 (NEUTRAL PRESSURE AT 40" ABOVE SILL) OR UL 10C.
   1. TEST PRESSURE: POSITIVE PRESSURE LABELING.

1.2 DELIVERY, STORAGE, AND HANDLING

A. TAG EACH ITEM OR PACKAGE SEPARATELY WITH IDENTIFICATION RELATED TO THE FINAL DOOR HARDWARE SCHEDULE, AND INCLUDE SIMILAR INSTALLATION INSTRUCTIONS WITH EACH ITEM OR PACKAGE.
B. DELIVER PERMANENT KEYS, CYLINDERS, CORES, ACCESS CONTROL CREDENTIALS, ELECTRONIC KEY SOFTWARE WITH LOADED KEYS, AND KEYING LISTS FOR CYLINDER AND RELATED ACCESSORIES DIRECTLY TO OWNER VIA REGISTERED MAIL OR OVERNIGHT PACKAGE SERVICE. INSTRUCTIONS FOR DELIVERY TO THE OWNER SHALL BE ESTABLISHED AT THE KEYING CONFERENCE. HARDWARE SUPPLIER MUST BE A REGIONAL SUPPLIER TO ADDRESS OWNER QUESTIONS AND CONCERNS RELATING TO KEYING ISSUES THAT ARISE AS PROJECT CLOSE-OUT.

1.3 COORDINATION

A. TEMPLATES: DOOR HARDWARE SUPPLIER TO FURNISH AND DISTRIBUTE TO THE PARTIES INVOLVED FOR TEMPLATING FOR DOORS, FRAMES, AND OTHER WORK SPECIFIED TO BE FACTORY PREPARED FOR INSTALLING STANDARD, ELECTRIFIED AND ACCESS CONTROL DOOR HARDWARE. CHECK SHOP DRAWINGS OF OTHER WORK TO CONFIRM THAT ADEQUATE PROVISIONS ARE MADE FOR LOCATING AND INSTALLING HARDWARE TO COMPLY WITH INDICATED REQUIREMENTS.

1.4 SCHEDULED DOOR HARDWARE

A. GENERAL: FURNISH DOOR HARDWARE FOR EACH DOOR TO COMPLY WITH REQUIREMENTS IN THIS SECTION AND THE DOOR HARDWARE SCHEDULE ON THE DRAWINGS.
   1. DOOR HARDWARE SETS: FURNISH QUANTITY, ITEM, SIZE, FINISH OR COLOR INDICATED FOR NAMED PRODUCTS LISTED IN HARDWARE SETS.
   2. SEQUENCE OF OPERATION: FURNISH ELECTRIFIED AND ACCESS CONTROL HARDWARE FUNCTION, SEQUENCE OF OPERATION, AND INTERFACE WITH OTHER BUILDING CONTROL SYSTEMS INDICATED.
B. DESIGNATIONS: REQUIREMENTS FOR DESIGN, GRADE, FUNCTION, FINISH, SIZE, AND OTHER DISTINCTIVE QUALITIES OF EACH TYPE OF DOOR HARDWARE ARE INDICATED IN THE DOOR HARDWARE SCHEDULE ON DRAWINGS

08 80 00 - GLAZING

1.1 PERFORMANCE REQUIREMENTS

A. GENERAL: INSTALLED GLAZING SYSTEMS SHALL WITHSTAND NORMAL THERMAL MOVEMENT AND WIND LOADS WITHOUT FAILURE, INCLUDING LOSS OR GLASS BREAKAGE ATTRIBUTABLE TO THE FOLLOWING: DEFECTIVE MANUFACTURE, FABRICATION OR INSTALLATION OF SEALANTS OR GASKETS TO REMAIN WATERTIGHT AND AIRTIGHT; DETERIORATION OF GLAZING MATERIALS; OR OTHER DEFECTS IN CONSTRUCTION.

1.2 SUBMITTALS

A. PRODUCT DATA: FOR EACH GLASS PRODUCT AND GLAZING MATERIAL INDICATED.

1.3 QUALITY ASSURANCE

A. MANUFACTURER QUALIFICATIONS FOR INSULATING-GLASS UNITS WITH SPUTTER-COATED, LOW-E COATINGS: A QUALIFIED INSULATING-GLASS MANUFACTURER WHO IS APPROVED AND CERTIFIED BY COATED-GLASS MANUFACTURER.
B. SAFETY GLAZING LABELING: WHERE SAFETY GLAZING LABELING IS INDICATED, PERMANENTLY MARK GLAZING WITH CERTIFICATION LABEL OF THE SGCC OR ANOTHER CERTIFICATION AGENCY ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION. LABEL SHALL INDICATE MANUFACTURER'S NAME, TYPE OF GLASS, THICKNESS, AND SAFETY GLAZING STANDARD WITH WHICH GLASS COMPLIES.

1.4 DELIVERY, STORAGE, AND HANDLING

A. PROTECT GLAZING MATERIALS ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS. PREVENT DAMAGE TO GLASS AND GLAZING MATERIALS FROM CONDENSATION, TEMPERATURE CHANGES, DIRECT EXPOSURE TO SUN, OR OTHER CAUSES.
B. COMPLY WITH INSULATING-GLASS MANUFACTURER'S WRITTEN RECOMMENDATIONS FOR VENTING AND SEALING UNITS TO AVOID HERMETIC SEAL RUPTURES DUE TO ALTITUDE CHANGE.

1.5 WARRANTY

A. MANUFACTURER'S SPECIAL WARRANTY FOR COATED-GLASS PRODUCTS: MANUFACTURER'S STANDARD FORM IN WHICH COATED-GLASS MANUFACTURER AGREES TO REPLACE COATED-GLASS UNITS THAT DETERIORATE WITHIN SPECIFIED WARRANTY PERIOD. DETERIORATION OF COATED GLASS IS DEFINED AS DEFECTS DEVELOPED FROM NORMAL USE THAT ARE NOT ATTRIBUTED TO GLASS BREAKAGE OR TO MAINTAINING AND CLEANING COATED GLASS CONTRARY TO MANUFACTURER'S WRITTEN INSTRUCTIONS. DEFECTS INCLUDE PEELING, CRACKING, AND OTHER INDICATIONS OF DETERIORATION IN COATING.

08 80 00 - GLAZING (CONT)

   1. WARRANTY PERIOD: 10 YEARS FROM DATE OF SUBSTANTIAL COMPLETION.
B. MANUFACTURER'S SPECIAL WARRANTY ON LAMINATED GLASS: MANUFACTURER'S STANDARD FORM IN WHICH LAMINATED-GLASS MANUFACTURER AGREES TO REPLACE LAMINATED-GLASS UNITS THAT DETERIORATE WITHIN SPECIFIED WARRANTY PERIOD. DETERIORATION OF LAMINATED GLASS IS DEFINED AS DEFECTS DEVELOPED FROM NORMAL USE THAT ARE NOT ATTRIBUTED TO GLASS BREAKAGE OR TO MAINTAINING AND CLEANING LAMINATED GLASS CONTRARY TO MANUFACTURER'S WRITTEN INSTRUCTIONS. DEFECTS INCLUDE EDGE SEPARATION, DELAMINATION MATERIALLY OBSTRUCTING VISION THROUGH GLASS, AND BLEMISHES EXCEEDING THOSE ALLOWED BY REFERENCED LAMINATED-GLASS STANDARD.
   1. WARRANTY PERIOD: 10 YEARS FROM DATE OF SUBSTANTIAL COMPLETION.

1.6 GLASS PRODUCTS, GENERAL

A. THICKNESS: WHERE GLASS THICKNESS IS INDICATED, IT IS A MINIMUM. PROVIDE GLASS LITES IN THICKNESSES AS NEEDED TO COMPLY WITH REQUIREMENTS INDICATED.
   1. MINIMUM GLASS THICKNESS FOR EXTERIOR LITES: NOT LESS THAN 6.0 MM.
B. STRENGTH: WHERE FLOAT GLASS IS INDICATED, PROVIDE ANNEALED FLOAT GLASS, KIND HS HEAT-TREATED FLOAT GLASS, OR KIND FT HEAT-TREATED FLOAT GLASS AS NEEDED TO COMPLY WITH "PERFORMANCE REQUIREMENTS" ARTICLE. WHERE HEAT-STRENGTHENED GLASS IS INDICATED, PROVIDE KIND HS HEAT-TREATED FLOAT GLASS OR KIND FT HEAT-TREATED FLOAT GLASS AS NEEDED TO COMPLY WITH "PERFORMANCE REQUIREMENTS" ARTICLE. WHERE FULLY TEMPERED GLASS IS INDICATED, PROVIDE KIND FT HEAT-TREATED FLOAT GLASS.

1.7 GLASS PRODUCTS

A. FLOAT GLASS: ASTM C 1036, TYPE I, QUALITY-Q3, CLASS I (CLEAR) UNLESS OTHERWISE INDICATED.
B. HEAT-TREATED FLOAT GLASS: ASTM C 1048; TYPE I, QUALITY-Q3; CLASS I (CLEAR) UNLESS OTHERWISE INDICATED; OF KIND AND CONDITION INDICATED.
   1. FABRICATION PROCESS: BY HORIZONTAL (ROLLER-HEARTH) PROCESS WITH ROLL-WAVE DISTORTION PARALLEL TO BOTTOM EDGE OF GLASS AS INSTALLED UNLESS OTHERWISE INDICATED.
   2. FOR UNCOATED GLASS, COMPLY WITH REQUIREMENTS FOR CONDITION A.
   3. FOR COATED VISION GLASS, COMPLY WITH REQUIREMENTS FOR CONDITION C (OTHER COATED GLASS).

1.8 GLAZING GASKETS

A. DENSE COMPRESSION GASKETS: MOLDED OR EXTRUDED GASKETS OF PROFILE AND HARDNESS REQUIRED TO MAINTAIN WATERTIGHT SEAL, MADE FROM ONE OF THE FOLLOWING:
   1. NEOPRENE COMPLYING WITH ASTM C 864.
   2. EPDM COMPLYING WITH ASTM C 864.
   3. SILICONE COMPLYING WITH ASTM C 1115.
   4. THERMOPLASTIC POLYOLEFIN RUBBER COMPLYING WITH ASTM C 1115.

1.9 GLAZING SEALANTS

A. GENERAL:
   1. COMPATIBILITY: PROVIDE GLAZING SEALANTS THAT ARE COMPATIBLE WITH ONE ANOTHER AND WITH OTHER MATERIALS THEY WILL CONTACT, INCLUDING GLASS PRODUCTS, SEALS OF INSULATING-GLASS UNITS, AND GLAZING AND SUBSTRATE LISTED, UNDER CONDITIONS OF SERVICE AND APPLICATION, AS DEMONSTRATED BY SEALANT MANUFACTURER BASED ON TESTING AND FIELD EXPERIENCE.
   2. SUITABILITY: COMPLY WITH SEALANT AND GLASS MANUFACTURERS' WRITTEN INSTRUCTIONS FOR SELECTING GLAZING SEALANTS SUITABLE FOR APPLICATIONS INDICATED AND FOR CONDITIONS EXISTING AT TIME OF INSTALLATION.
   3. VOC CONTENT: FOR SEALANTS USED INSIDE OF THE WEATHERPROOFING SYSTEM, NOT MORE THAN 250 G/L WHEN CALCULATED ACCORDING TO 40 CFR 59, SUBPART D.
B. GLAZING SEALANT: NEUTRAL-CURING SILICONE GLAZING SEALANT COMPLYING WITH ASTM C 920, TYPE S, GRADE NS, CLASS 50, USE NT.
   1. PRODUCTS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE ONE OF THE FOLLOWING:
      a. DOW CORNING CORPORATION; 795.
      b. GE ADVANCED MATERIALS - SILICONES; SILGLAZE II SCS2900.
      c. PECORA CORPORATION; 864.
      d. TREMCO INCORPORATED; SPECTREM 2.

1.10 GLAZING TAPES

A. BACKBEDDING MASTIC GLAZING TAPES: PREFORMED, BUTYL-BASED, 100 PERCENT SOLIDS ELASTOMERIC TAPE; NONSTAINING AND NONMIGRATORY IN CONTACT WITH NONPOROUS SURFACES; WITH CONTINUOUS SPACER ROD AS RECOMMENDED IN WRITING BY TAPE AND GLASS MANUFACTURERS FOR APPLICATION INDICATED; AND COMPLYING WITH ASTM C 1281 AND AAMA 800 FOR PRODUCTS INDICATED BELOW.
   1. AAMA 804.3 TAPE, WHERE INDICATED.
   2. AAMA 806.3 TAPE, FOR GLAZING APPLICATIONS IN WHICH TAPES SUBJECT TO CONTINUOUS PRESSURE.
   3. AAMA 807.3 TAPE, FOR GLAZING APPLICATIONS IN WHICH TAPE IS NOT SUBJECT TO CONTINUOUS PRESSURE.

1.11 MISCELLANEOUS GLAZING MATERIALS

A. GENERAL: PROVIDE PRODUCTS OF MATERIAL, SIZE, AND SHAPE COMPLYING WITH REFERENCED GLAZING STANDARD, REQUIREMENTS OF MANUFACTURERS OF GLASS AND OTHER GLAZING MATERIALS FOR APPLICATION INDICATED, AND WITH GLASS AND GLAZING MATERIALS' GUARANTEE-WARRANTY PROVISIONS.
B. CLEANERS, PRIMERS, AND SEALERS: TYPES RECOMMENDED BY SEALANT OR GASKET MANUFACTURER.
C. SETTING BLOCKS: ELASTOMERIC MATERIAL WITH A SHORE, TYPE A DUROMETER HARDNESS OF 85, PLUS OR MINUS 5.
D. SPACERS: ELASTOMERIC BLOCKS OR CONTINUOUS EXTRUSIONS OF HARDNESS REQUIRED BY GLASS MANUFACTURER TO MAINTAIN GLASS LITES IN PLACE FOR INSTALLATION INDICATED.
E. EDGE BLOCKING: ELASTOMERIC MATERIAL OF HARDNESS NEEDED TO LIMIT GLASS LATERAL MOVEMENT (SIDE WALKING).
F. CYLINDRICAL GLAZING SEALANT BACKING: ASTM C 1330, TYPE O (OPEN-CELL MATERIAL), OF SIZE AND DENSITY TO CONTROL GLAZING SEALANT DEPTH AND OTHERWISE PRODUCE OPTIMUM GLAZING SEALANT PERFORMANCE.
G. PERIMETER INSULATION FOR FIRE-RESISTIVE GLAZING: PRODUCT THAT IS APPROVED BY TESTING AGENCY THAT LISTED AND LABELED FIRE-RESISTANT GLAZING PRODUCT WITH WHICH IT IS USED FOR APPLICATION AND FIRE-PROTECTION RATING INDICATED.

1.12 FABRICATION OF GLAZING UNITS

A. FABRICATE GLAZING UNITS IN SIZES REQUIRED TO FIT OPENINGS INDICATED FOR PROJECT, WITH EDGE AND FACE CLEARANCES, EDGE AND SURFACE CONDITIONS, AND BITE COMPLYING WITH WRITTEN INSTRUCTIONS OF PRODUCT MANUFACTURER AND REFERENCED GLAZING PUBLICATIONS, TO COMPLY WITH SYSTEM PERFORMANCE REQUIREMENTS.
B. CLEAN-CUT OR FLAT-GRIND VERTICAL EDGES OF BUTT-GLAZED MONOLITHIC LITES TO PRODUCE SQUARE EDGES WITH SLIGHT CHAMFER AT JUNCTIONS OF FACES AND EDGES AND FACES.
C. GRIND SMOOTH AND POLISH EXPOSED GLASS EDGES AND CORNERS.

1.13 GLASS SCHEDULE

A. REFER TO ENVELOPE ASSEMBLY INFORMATION ON DRAWINGS FOR GLAZING TYPES
B. PROVIDE SAFETY GLAZING LABELING WHERE APPROPRIATE.

1.14 GLAZING, GENERAL

A. COMPLY WITH COMBINED WRITTEN INSTRUCTIONS OF MANUFACTURERS OF GLASS, SEALANTS, GASKETS, AND OTHER GLAZING MATERIALS, UNLESS MORE STRINGENT REQUIREMENTS ARE INDICATED, INCLUDING THOSE IN REFERENCED GLAZING PUBLICATIONS.
B. ADJUST GLAZING CHANNEL DIMENSIONS AS REQUIRED BY PROJECT CONDITIONS DURING INSTALLATION TO PROVIDE NECESSARY BITE ON GLASS, MINIMUM EDGE AND FACE CLEARANCES, AND ADEQUATE SEALANT THICKNESSES, WITH REASONABLE TOLERANCES.
C. PROTECT GLASS EDGES FROM DAMAGE DURING HANDLING AND INSTALLATION. REMOVE DAMAGED GLASS FROM PROJECT SITE AND LEGALLY DISPOSE OF OFF PROJECT SITE. DAMAGED GLASS IS GLASS WITH EDGE DAMAGE OR OTHER IMPERFECTIONS THAT, WHEN INSTALLED, COULD WEAKEN GLASS AND IMPAIR PERFORMANCE AND APPEARANCE.
D. APPLY PRIMERS TO JOINT SURFACES WHERE REQUIRED FOR ADHESION OF SEALANTS, AS DETERMINED BY PRECONSTRUCTION TESTING.
E. INSTALL SETTING BLOCKS IN SILL RABBETS, SIZED AND LOCATED TO COMPLY WITH REFERENCED GLAZING PUBLICATIONS, UNLESS OTHERWISE REQUIRED BY GLASS MANUFACTURER. SET BLOCKS IN THIN COURSE OF COMPATIBLE SEALANT SUITABLE FOR HEEL BEAD.
F. DO NOT EXCEED EDGE PRESSURES STIPULATED BY GLASS MANUFACTURERS FOR INSTALLING GLASS LITES.
G. PROVIDE SPACERS FOR GLASS LITES WHERE LENGTH PLUS WIDTH IS LARGER THAN 50 INCHES (1270 MM).
   1. LOCATE SPACERS DIRECTLY OPPOSITE EACH OTHER ON BOTH INSIDE AND OUTSIDE FACES OF GLASS. INSTALL CORRECT SIZE AND SPACING TO PRESERVE REQUIRED FACE CLEARANCES, UNLESS GASKETS AND GLAZING TAPES ARE USED THAT HAVE DEMONSTRATED ABILITY TO MAINTAIN REQUIRED FACE CLEARANCES AND TO COMPLY WITH SYSTEM PERFORMANCE REQUIREMENTS.
   2. PROVIDE 1/8-INCH MINIMUM BITE OF SPACERS ON GLASS AND USE THICKNESS EQUAL TO SEALANT WIDTH, WITH GLAZING TAPE, USE THICKNESS SLIGHTLY LESS THAN FINAL COMPRESSED THICKNESS OF TAPE.
H. PROVIDE EDGE BLOCKING WHERE INDICATED OR NEEDED TO PREVENT GLASS LITES FROM MOVING SIDEWAYS IN GLAZING CHANNEL, AS RECOMMENDED IN WRITING BY GLASS MANUFACTURER AND ACCORDING TO REQUIREMENTS IN REFERENCED GLAZING PUBLICATIONS.
I. SET GLASS LITES IN EACH SERIES WITH UNIFORM PATTERN, DRAW, BOW, AND SIMILAR CHARACTERISTICS.
J. SET GLASS LITES WITH PROPER ORIENTATION SO THAT COATINGS FACE EXTERIOR OR INTERIOR AS SPECIFIED.
K. WHERE WEDGE-SHAPED GASKETS ARE DRIVEN INTO ONE SIDE OF CHANNEL TO PRESSURIZE SEALANT OR GASKET ON OPPOSITE SIDE, PROVIDE ADEQUATE ANCHORAGE SO GASKET CANNOT WALK OUT WHEN INSTALLATION IS SUBJECTED TO MOVEMENT.

08 90 00 - GLAZING (CONT)

L. SQUARE CUT WEDGE-SHAPED GASKETS AT CORNERS AND INSTALL GASKETS IN A MANNER RECOMMENDED BY GASKET MANUFACTURER TO PREVENT CORNERS FROM PULLING AWAY, SEAL CORNER JOINTS AND BUTT JOINTS WITH SEALANT RECOMMENDED BY GASKET MANUFACTURER.

1.15 TAPE GLAZING

A. POSITION TAPES ON FIXED STOPS SO THAT, WHEN COMPRESSED BY GLASS, THEIR EXPOSED EDGES ARE FLUSH WITH OR PROTRUDE SLIGHTLY ABOVE SIGHTLINE OF STOPS.
B. INSTALL TAPES CONTINUOUSLY, BUT NOT NECESSARILY IN ONE CONTINUOUS LENGTH. DO NOT STRETCH TAPES TO MAKE THEM FIT OPENINGS.
C. COVER VERTICAL FRAMING JOINTS BY APPLYING TAPES TO HEADS AND SILLS FIRST AND THEN TO JAMBS. COVER HORIZONTAL FRAMING JOINTS BY APPLYING TAPES TO JAMBS FIRST AND THEN TO HEADS AND SILLS.
D. PLACE JOINTS IN TAPES AT CORNERS OF OPENING WITH ADJOINING LENGTHS BUTTED TOGETHER, NOT LAPPED. SEAL JOINTS IN TAPES WITH COMPATIBLE SEALANT APPROVED BY TAPE MANUFACTURER.
E. DO NOT REMOVE RELEASE PAPER FROM TAPE UNTIL GLASS OR OTHER GLAZING UNIT IS INSTALLED.
F. APPLY HEEL BEAD OF ELASTOMERIC SEALANT.
G. CENTER GLASS LITES IN OPENING ON SETTING BLOCKS AND PRESS FIRMLY AGAINST TAPE BY INSERTING DENSE COMPRESSION GASKETS FORMED AND INSTALLED TO LOCK IN PLACE AGAINST FACES OF REMOVABLE STOPS. START GASKET APPLICATIONS AT CORNERS AND WORK TOWARD CENTERS OF OPENINGS. COMPRESS GASKETS TO PRODUCE A WEATHERTIGHT SEAL WITHOUT DEVELOPING BENDING STRESSES IN GLASS. SEAL GASKET JOINTS WITH SEALANT RECOMMENDED BY GASKET MANUFACTURER.
H. APPLY SEALANT BEAD AT EXTERIOR OF JOINTS BETWEEN GLAZING AND ADJACENT CONSTRUCTION.

1.16 GASKET GLAZING (DRY)

A. CUT COMPRESSION GASKETS TO LENGTHS RECOMMENDED BY GASKET MANUFACTURER TO FIT OPENINGS EXACTLY, WITH ALLOWANCE FOR STRETCH DURING INSTALLATION.
B. INSERT SOFT COMPRESSION GASKET BETWEEN GLASS AND FRAME OR FIXED STOP SO IT IS SECURELY IN PLACE WITH JOINTS NEITHER CUT AND BONDED TOGETHER AT CORNERS.
C. INSTALLATION WITH DRIVEN WEDGE GASKETS: CENTER GLASS LITES IN OPENINGS ON SETTING BLOCKS AND PRESS FIRMLY AGAINST SOFT COMPRESSION GASKET BY INSERTING DENSE COMPRESSION GASKETS FORMED AND INSTALLED TO LOCK IN PLACE AGAINST FACES OF REMOVABLE STOPS. START GASKET APPLICATIONS AT CORNERS AND WORK TOWARD CENTERS OF OPENINGS. COMPRESS GASKETS TO PRODUCE A WEATHERTIGHT SEAL WITHOUT DEVELOPING BENDING STRESSES IN GLASS. SEAL GASKET JOINTS WITH SEALANT RECOMMENDED BY GASKET MANUFACTURER.
D. INSTALLATION WITH PRESSURE-GLAZING STOPS: CENTER GLASS LITES IN OPENINGS ON SETTING BLOCKS AND PRESS FIRMLY AGAINST SOFT COMPRESSION GASKET. INSTALL DENSE COMPRESSION GASKETS AND PRESSURE-GLAZING STOPS, APPLYING PRESSURE UNIFORMLY TO COMPRESSION GASKETS. COMPRESS GASKETS TO PRODUCE A WEATHERTIGHT SEAL WITHOUT DEVELOPING BENDING STRESSES IN GLASS. SEAL GASKET JOINTS WITH SEALANT RECOMMENDED BY GASKET MANUFACTURER.
E. INSTALL GASKETS SO THEY PROTRUDE PAST FACE OF GLAZING STOPS.

08 81 10 - FIXED LOUVERS

1.1 ACTION SUBMITTALS

A. PRODUCT DATA: FOR EACH TYPE OF PRODUCT.
   1. LOUVERS SHALL BEAR AMCA SEAL, INCLUDE PRINTED CATALOG PAGES SHOWING SPECIFIED MODELS WITH APPROPRIATE AMCA CERTIFIED RATINGS SEALS.
B. SHOP DRAWINGS: FOR LOUVERS AND ACCESSORIES. INCLUDE PLANS, ELEVATIONS, SECTIONS, DETAILS, AND ATTACHMENTS TO OTHER WORK. SHOW FRAME PROFILES AND BLADE PROFILES, ANGLES, AND SPACING.
C. SAMPLES: FOR EACH TYPE OF METAL FINISH REQUIRED.
D. DELEGATED-DESIGN SUBMITTAL: FOR LOUVERS INDICATED TO COMPLY WITH STRUCTURAL AND SEISMIC PERFORMANCE REQUIREMENTS, INCLUDE ANALYSIS DATA SIGNED AND SEALED BY THE QUALIFIED PROFESSIONAL ENGINEER RESPONSIBLE FOR THEIR PREPARATION.

1.2 INFORMATIONAL SUBMITTALS

A. PRODUCT TEST REPORTS: BASED ON TESTS PERFORMED ACCORDING TO AMCA 500-L.
B. WINDBORNE-DEBRIS-IMPACT-RESISTANCE TEST REPORTS.

1.3 PERFORMANCE REQUIREMENTS

A. DELEGATED DESIGN: DESIGN LOUVERS, INCLUDING COMPREHENSIVE ENGINEERING ANALYSIS BY A QUALIFIED PROFESSIONAL ENGINEER, USING PERFORMANCE AND SEISMIC PERFORMANCE REQUIREMENTS AND DESIGN CRITERIA INDICATED.
B. STRUCTURAL PERFORMANCE: LOUVERS SHALL WITHSTAND THE EFFECTS OF GRAVITY LOADS AND THE FOLLOWING LOADS AND STRESSES WITHIN LIMITS AND UNDER CONDITIONS INDICATED WITHOUT PERMANENT DEFORMATION OF LOUVER COMPONENTS, NOISE OR METAL FATIGUE CAUSED BY LOUVER-BLADE RATTLE OR FLUTTER, OR PERMANENT DAMAGE TO FASTENERS AND ANCHORS. WIND PRESSURES SHALL BE CONSIDERED TO ACT NORMAL TO THE FACE OF GLAZING AS FOLLOWS:
   1. WIND LOADS: DETERMINE LOADS BASED ON PRESSURES AS INDICATED ON DRAWINGS.
   2. WIND LOADS: DETERMINE LOADS BASED ON A UNIFORM PRESSURE OF 30 LBF/SQ. FT., ACTING INWARD OR OUTWARD.
C. WINDBORNE-DEBRIS-IMPACT RESISTANCE: LOUVERS LOCATED WITHIN 30 FEET OF GRADE SHALL PASS BASIC-PROTECTION LARGE-MISSILE TESTING REQUIREMENTS IN ASTM E 1886 FOR WIND ZONE 3 WHEN TESTED ACCORDING TO ASTM E 1886. TEST SPECIMENS SHALL BE NO SMALLER IN WIDTH AND LENGTH THAN LOUVERS INDICATED FOR USE ON PROJECT.
D. SEISMIC PERFORMANCE: LOUVERS, INCLUDING ATTACHMENTS TO OTHER CONSTRUCTION, SHALL WITHSTAND THE EFFECTS OF EARTHQUAKE MOTIONS DETERMINED ACCORDING TO ASCE/SEI 7.
   1. DESIGN EARTHQUAKE SPECTRAL RESPONSE ACCELERATION, SHORT PERIOD (SDS) FOR PROJECTS INDICATED IN DRAWINGS.
   2. COMPONENT IMPORTANCE FACTOR: AS INDICATED IN DRAWINGS.
E. LOUVER PERFORMANCE RATINGS: PROVIDE LOUVERS COMPLYING WITH REQUIREMENTS SPECIFIED, AS DEMONSTRATED BY TESTING MANUFACTURER'S STOCK UNITS IDENTICAL TO THOSE PROVIDED, EXCEPT FOR LENGTH AND WIDTH ACCORDING TO AMCA 500-L.

1.4 FIXED, EXTRUDED-ALUMINUM LOUVERS

A. A. HORIZONTAL, NONDRAINABLE-BLADE LOUVER:
   1. LOUVER DEPTH: AS INDICATED IN DRAWINGS.
   2. BLADE PROFILE: PLAIN BLADE WITHOUT CENTER BAFFLE.
   3. FRAME AND BLADE NOMINAL THICKNESS: NOT LESS THAN 0.050 INCH FOR BLADES AND 0.050 INCH FOR FRAMES.
   4. MULLION TYPE: EXPOSED.
   5. LOUVER PERFORMANCE RATINGS:
      a. FREE AREA: NOT LESS THAN 7.5 SQ. FT. FOR 48-INCH- WIDE BY 48-INCH- HIGH LOUVER.
      b. POINT OF BEGINNING WATER PENETRATION: NOT LESS THAN 700 FPM.
      c. AIR PERFORMANCE: NOT MORE THAN 0.10-INCH WG STATIC PRESSURE DROP AT 706-FPM FREE-AREA INTAKE VELOCITY.
B. B. HORIZONTAL, DRAINABLE-BLADE LOUVER:
   1. LOUVER DEPTH: AS INDICATED IN DRAWINGS.
   2. FRAME AND BLADE NOMINAL THICKNESS: NOT LESS THAN 0.080 INCH FOR BLADES AND 0.080 INCH FOR FRAMES.
   3. MULLION TYPE: EXPOSED.
   4. LOUVER PERFORMANCE RATINGS:
      a. FREE AREA: NOT LESS THAN 7.2 SQ. FT. FOR 48-INCH- WIDE BY 48-INCH- HIGH LOUVER.
      b. POINT OF BEGINNING WATER PENETRATION: NOT LESS THAN 800 FPM.
      c. AIR PERFORMANCE: NOT MORE THAN 0.10-INCH WG STATIC PRESSURE DROP AT 706-FPM FREE-AREA INTAKE VELOCITY.
   5. AMCA SEAL: MARK UNITS WITH AMCA CERTIFIED RATINGS SEAL.
C. HORIZONTAL, WIND-DRIVEN-RAIN-RESISTANT LOUVER:
   1. LOUVER DEPTH: AS INDICATED IN DRAWINGS.
   2. FRAME AND BLADE NOMINAL THICKNESS: NOT LESS THAN 0.080 INCH FOR BLADES AND 0.080 INCH FOR FRAMES.
   3. LOUVER PERFORMANCE RATINGS:
      a. FREE AREA: NOT LESS THAN 5.0 SQ. FT. FOR 48-INCH- WIDE BY 48-INCH- HIGH LOUVER.
      b. AIR PERFORMANCE: NOT MORE THAN 0.10-INCH WG STATIC PRESSURE DROP AT 600-FPM FREE-AREA INTAKE VELOCITY.
      c. WIND-DRIVEN RAIN PERFORMANCE: NOT LESS THAN 80 PERCENT EFFECTIVENESS WHEN SUBJECTED TO A RAINFALL RATE OF 3 INCHES PER HOUR AND A WIND SPEED OF 29 MPH AT A CORE-AREA INTAKE VELOCITY OF 300 FPM.
   4. AMCA SEAL: MARK UNITS WITH AMCA CERTIFIED RATINGS SEAL.
D. VERTICAL, WIND-DRIVEN-RAIN-RESISTANT LOUVER:
   1. LOUVER DEPTH: AS INDICATED IN DRAWINGS.
   2. FRAME AND BLADE NOMINAL THICKNESS: NOT LESS THAN 0.050 INCH FOR BLADES AND 0.080 INCH FOR FRAMES.
   3. LOUVER PERFORMANCE RATINGS:
      a. FREE AREA: NOT LESS THAN 5.0 SQ. FT. FOR 48-INCH- WIDE BY 48-INCH- HIGH LOUVER.
      b. AIR PERFORMANCE: NOT MORE THAN 0.10-INCH WG STATIC PRESSURE DROP AT 600-FPM FREE-AREA INTAKE VELOCITY.
      c. WIND-DRIVEN RAIN PERFORMANCE: NOT LESS THAN 80 PERCENT EFFECTIVENESS WHEN SUBJECTED TO A RAINFALL RATE OF 3 INCHES PER HOUR AND A WIND SPEED OF 29 MPH AT A CORE-AREA INTAKE VELOCITY OF 300 FPM.
   4. AMCA SEAL: MARK UNITS WITH AMCA CERTIFIED RATINGS SEAL.

1.5 FIXED, FORMED-METAL LOUVERS

A. HORIZONTAL, NONDRAINABLE-BLADE LOUVER:
   1. LOUVER DEPTH: AS INDICATED IN DRAWINGS.
   2. BLADE PROFILE: PLAIN BLADE WITHOUT CENTER BAFFLE.
   3. FRAME AND BLADE MATERIAL AND NOMINAL THICKNESS: GALVANIZED-STEEL SHEET, NOT LESS THAN 0.052 INCH FOR FRAMES AND 0.040 INCH FOR BLADES.
   4. MULLION TYPE: EXPOSED.
   5. LOUVER PERFORMANCE RATINGS:
      a. FREE AREA: NOT LESS THAN 8.5 SQ. FT. FOR 48-INCH- WIDE BY 48-INCH- HIGH LOUVER.
      b. POINT OF BEGINNING WATER PENETRATION: NOT LESS THAN 550 FPM.
      c. AIR PERFORMANCE: NOT MORE THAN 0.10-INCH WG STATIC PRESSURE DROP AT 556-FPM FREE-AREA INTAKE VELOCITY.
B. B. HORIZONTAL, DRAINABLE-BLADE LOUVER:
   1. LOUVER DEPTH: AS INDICATED IN DRAWINGS.
   2. FRAME AND BLADE MATERIAL AND NOMINAL THICKNESS: GALVANIZED-STEEL SHEET, NOT LESS THAN 0.052 INCH FOR FRAMES AND 0.040 INCH FOR BLADES.
   3. MULLION TYPE: EXPOSED.

08 81 10 - FIXED LOUVERS (CONT)

   4. LOUVER PERFORMANCE RATINGS:
      a. FREE AREA: NOT LESS THAN 7.2 SQ. FT. FOR 48-INCH- WIDE BY 48-INCH- HIGH LOUVER.
      b. POINT OF BEGINNING WATER PENETRATION: NOT LESS THAN 800 FPM.
      c. AIR PERFORMANCE: NOT MORE THAN 0.10-INCH WG STATIC PRESSURE DROP AT 706-FPM FREE-AREA INTAKE VELOCITY.
   5. AMCA SEAL: MARK UNITS WITH AMCA CERTIFIED RATINGS SEAL.

1.6 LOUVER SCREENS

A. GENERAL: PROVIDE SCREEN AT EACH EXTERIOR LOUVER.
   1. SCREEN LOCATION FOR FIXED LOUVERS: INTERIOR FACE.
   2. SCREENS TO MEET 2012 IBC SECTION 1405.9.
B

CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED

09 29 00 - GYPSUM BOARD (CONT)

1.10 APPLYING AND FINISHING PANELS, GENERAL

A. COMPLY WITH ASTM C840, GA-216-2007.
B. INSTALL CEILING PANELS ACROSS FRAMING TO MINIMIZE THE NUMBER OF ABUTTING END JOINTS AND TO AVOID ABUTTING END JOINTS IN CENTRAL AREA OF EACH CEILING. STAGGER ABUTTING END JOINTS OF ADJACENT PANELS NOT LESS THAN ONE FRAMING MEMBER.
C. INSTALL PANELS WITH FACE SIDE OUT. BUTT PANELS TOGETHER FOR A LIGHT CONTACT AT EDGES AND ENDS WITH NOT MORE THAN 1/16 INCH (1.5 MM) OF OPEN SPACE BETWEEN PANELS. DO NOT FORCE INTO PLACE.
D. LOCATE EDGE AND END JOINTS OVER SUPPORTS, EXCEPT IN CEILING APPLICATIONS WHERE INTERMEDIATE SUPPORTS OR GYPSUM BOARD BACKBLOCKING IS PROVIDED BEHIND END JOINTS. DO NOT PLACE TAPERED EDGES AGAINST CUT EDGES OR ENDS. STAGGER VERTICAL JOINTS ON OPPOSITE SIDES OF PARTITIONS. DO NOT MAKE JOINTS OTHER THAN CONTROL JOINTS AT CORNERS OF FRAMED OPENINGS.
E. FORM CONTROL AND EXPANSION JOINTS WITH SPACE BETWEEN EDGES OF ADJOINING GYPSUM PANELS.
F. COVER BOTH FACES OF GYPSUM PANELS IN CONCEALED SPACES (ABOVE CEILINGS, ETC., EXCEPT IN SHAFTS AS INDICATED INTERNALLY.
   1. FIT GYPSUM PANELS AROUND DUCTS, PIPES, AND CONDUITS.
   2. WHERE PARTITIONS INTERSECT STRUCTURAL MEMBERS, PROJECTING BELOW UNDERSIDE OF FLOOR/ROOF SLABS AND DECKS, CUT GYPSUM PANELS TO FIT PROFILE FORMED BY STRUCTURAL MEMBERS; ALLOW 1/4- TO 3/4-INCH-WIDE JOINTS TO INSTALL SEALANT.
G. ISOLATE PERIMETER OF GYPSUM BOARD APPLIED TO NON-LOAD-BEARING PARTITIONS AT STRUCTURAL ABUTMENTS, EXCEPT FLOORS, PROVIDE 1/4 TO 1/2-INCH-WIDE SPACES AT THESE LOCATIONS AND TRIM EDGES WITH EDGE TRIM WHERE EDGES OF PANELS ARE EXPOSED. LOCATE JOINTS BETWEEN EDGES AND ABUTTING STRUCTURAL SURFACES WITH ACOUSTICAL SEALANT.
H. INSTALL SOUND ATTENUATION BLANKETS BEFORE INSTALLING GYPSUM PANELS UNLESS BLANKETS ARE READILY INSTALLED AFTER PANELS HAVE BEEN INSTALLED ON ONE SIDE.
I. CEILING WITH PERIMETER RELIEF: CONTROL JOINTS IN INTERIOR CEILINGS WITH PERIMETER RELIEF SHALL BE INSTALLED SO THAT LINEAR DIMENSIONS BETWEEN CONTROL JOINTS DO NOT EXCEED 50 FT OR 2500 SQ. FT.
J. CEILING, WITHOUT PERIMETER RELIEF: CONTROL JOINTS IN INTERIOR CEILINGS WITHOUT PERIMETER RELIEF SHALL BE INSTALLED SO THAT LINEAR DIMENSIONS BETWEEN CONTROL JOINTS DO NOT EXCEED 30 FT
K. AT ACOUSTICAL OR FIR RATED WALLS: WHERE A CONTROL JOINT OCCURS IN AN ACOUSTICAL OR FIRE RATED SYSTEM, BLOCKING SHALL BE PROVIDED BEHIND THE CONTROL JOINT BY USING A BACKING MATERIAL SUCH AS 5/8 IN. TYPE X GYPSUM PANEL PRODUCTS, MINERAL FIBER, OR OTHER TESTED EQUIVALENT
L. INTERIOR TRIM: INSTALL IN THE FOLLOWING LOCATIONS:
   1. CORNERSEAD: USE AT OUTSIDE CORNERS.
   2. LCBEAD: USE AT EXPOSED PANEL EDGES.
   3. L-BEAD: USE WHERE INDICATED.

1.14 FINISHING GYPSUM BOARD

A. PREFILL OPEN JOINTS, ROUNDED OR BEVELED EDGES, AND DAMAGED SURFACE AREAS.
B. APPLY JOINT TAPE OVER GYPSUM BOARD JOINTS, EXCEPT FOR TRIM PRODUCTS SPECIFICALLY INDICATED AS NOT INTENDED TO RECEIVE TAPE.
C. GYPSUM BOARD FINISH LEVELS: FINISH PANELS TO LEVELS INDICATED BELOW AND ACCORDING TO ASTM C 840:
   1. LEVEL 1: CEILING PLENUM AREAS, CONCEALED AREAS, AND WHERE INDICATED.
   2. LEVEL 2: WAREHOUSE STORAGE AREAS.
   3. LEVEL 3: BENEATH WALL COVERINGS.
   4. LEVEL 4: AT PANEL SURFACES THAT WILL BE EXPOSED TO VIEW UNLESS OTHERWISE INDICATED.

1.11 APPLYING INTERIOR GYPSUM BOARD

A. INSTALL INTERIOR GYPSUM BOARD IN THE FOLLOWING LOCATIONS (UNLESS NOTED OTHERWISE):
   1. TYPE X: VERTICAL SURFACES UNLESS OTHERWISE INDICATED.
   2. MOISTURE- AND MOLD-RESISTANT TYPE: AT CAMP LOCATIONS WHERE TILE BACKER BOARD IS NOT USED.
B. SINGLE-LAYER APPLICATION:
   1. ON CEILINGS, APPLY GYPSUM PANELS BEFORE WALL/PARTITION BOARD APPLICATION TO GREATEST EXTENT POSSIBLE AND AT RIGHT ANGLES TO FRAMING UNLESS OTHERWISE INDICATED.
   2. ON PARTITIONS/WALLS, APPLY GYPSUM PANELS VERTICALLY (PARALLEL TO FRAMING) UNLESS OTHERWISE INDICATED OR REQUIRED BY FIRE-RESISTANCE-RATED ASSEMBLY, AND MINIMIZE END JOINTS.
      a. STAGGER ABUTTING END JOINTS NOT LESS THAN ONE FRAMING MEMBER IN ALTERNATE COURSES OF PANELS.
   3. ON Z-FURRING MEMBERS, APPLY GYPSUM PANELS VERTICALLY (PARALLEL TO FRAMING) WITH NO END JOINTS. LOCATE EDGE JOINTS OVER FURRING MEMBERS.
   4. FASTENING METHODS: APPLY GYPSUM PANELS TO SUPPORTS WITH STEEL DRILL SCREWS.
C. MULTILAYER APPLICATION:
   1. ON CEILINGS, APPLY GYPSUM BOARD INDICATED FOR BASE LAYERS BEFORE APPLYING BASE LAYERS ON WALLS/PARTITIONS; APPLY FACE LAYERS IN SAME SEQUENCE. APPLY BASE LAYERS AT RIGHT ANGLES TO FRAMING MEMBERS AND OFFSET FACE-LAYER JOINTS ONE FRAMING MEMBER, 16 INCHES MINIMUM, FROM PARALLEL BASE-LAYER JOINTS, UNLESS OTHERWISE INDICATED OR REQUIRED BY FIRE-RESISTANCE-RATED ASSEMBLY.
   2. ON PARTITIONS/WALLS, APPLY GYPSUM BOARD INDICATED FOR BASE LAYERS AND FACE LAYERS VERTICALLY (PARALLEL TO FRAMING) WITH JOINTS OF BASE LAYERS LOCATED OVER STUD OR FURRING MEMBER AND FACE-LAYER JOINTS OFFSET AT LEAST ONE STUD OR FURRING MEMBER WITH BASE-LAYER JOINTS, UNLESS OTHERWISE INDICATED OR REQUIRED BY FIRE-RESISTANCE-RATED ASSEMBLY. STAGGER JOINTS ON OPPOSITE SIDES OF PARTITIONS.
   3. ON Z-FURRING MEMBERS, APPLY BASE LAYER VERTICALLY (PARALLEL TO FRAMING) AND FACE LAYER EITHER VERTICALLY (PARALLEL TO FRAMING) OR HORIZONTALLY (PERPENDICULAR TO FRAMING) WITH VERTICAL JOINTS OFFSET AT LEAST ONE FURRING MEMBER. LOCATE EDGE JOINTS OF BASE LAYER OVER FURRING MEMBERS.
   4. FASTENING METHODS: FASTEN BASE LAYERS AND FACE LAYERS SEPARATELY TO SUPPORTS WITH SCREWS.

1.12 INSTALLING TRIM ACCESSORIES

A. CONTROL JOINTS: INSTALL CONTROL JOINTS AT LOCATIONS INDICATED ON DRAWINGS, AND ACCORDING TO ASTM C 840 AND ENVIRONMENT GROUP'S APPROVED SHOP DRAWINGS.
B. WALL CONTROL JOINTS SHALL BE INSTALLED WHERE A WALL OR PARTITION RUNS IN AN UNINTERRUPTED STRAIGHT PLANE EXCEEDING 30 LINEAR FEET, OR 900 FT2

09 61 16 - CONCRETE FLOOR SEALING

1.1 SUBMITTALS

A. PRODUCT DATA: SUBMIT MANUFACTURER'S TECHNICAL LITERATURE, INCLUDING CHEMICAL PROPERTIES AND PERCENTAGE OF SOLIDS, FOR EACH PRODUCT.

1.2 ENVIRONMENTAL REQUIREMENTS

A. DO NOT APPLY MATERIALS WHEN AMBIENT OR SUBSTRATE SURFACE TEMPERATURES ARE BELOW 40 DEGREES F OR HIGHER THAN 100 DEGREES F.
B. DO NOT APPLY DURING INCLEMENT WEATHER OR WHEN FORECASTED CONDITIONS WILL NOT PERMIT COMPLIANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS.
C. PROVIDE MECHANICAL VENTILATION DURING AND AFTER APPLICATION TO DISSIPATE FUMES IF NATURAL VENTILATION IS INSUFFICIENT.

1.3 MATERIALS

A. LIQUID MEMBRANE-FORMING SEALER (FOR USE ON CONCRETE FLOOR SLABS INTENDED TO BE LEFT EXPOSED):
   1. ACCEPTABLE PRODUCTS:
      a. DAYTON SUPERIOR CORPORATION; ULTRA SEAL EF.

1.4 PREPARATION

A. REMOVE LOOSE PARTICLES, FOREIGN MATTER, AND OIL BY METHOD WHICH WILL NOT AFFECT SEALER APPLICATION.
B. PREPARE SURFACES IN ACCORDANCE WITH MANUFACTURER'S DIRECTIONS.
C. PROVIDE PROTECTION AS NECESSARY TO PROTECT ADJACENT MATERIALS AND SURFACES FROM DIRT, DUST, SPILLAGE, OVERSPRAY AND OTHER SURFACE OR PHYSICAL DAMAGE.

1.5 APPLICATION

A. GENERAL:
   1. PROVIDE FINISHES TO MATCH APPROVED SAMPLES AT LOCATIONS INDICATED.
   2. APPLY MATERIALS IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS.
B. LIQUID MEMBRANE-FORMING SEALER:
   1. APPLY SEALER USING LOW PRESSURE AIRLESS SPRAYER IN SINGLE COAT AT 250 F/SQAL (6.0-7.2 WFT) COVERAGE UNLESS GREATER AMOUNT IS RECOMMENDED BY MANUFACTURER TO OBTAIN PENETRATION AND FULL COVERAGE.
   2. DO NOT ALLOW FLOODING OR PUDDLING OF MATERIAL ON SURFACE.
   3. DO NOT DILUTE OR ALTER MATERIAL AS PACKAGED.
   4. LOCATIONS: AS INDICATED ON PLANS AND ON ALL EXPOSED CONCRETE FLOORING INSIDE OF BUILDING.

09 91 00 - PAINTING

1.1 QUALITY ASSURANCE

A. PRODUCT MANUFACTURER: COMPANY SPECIALIZING IN MANUFACTURING QUALITY PAINT AND FINISH PRODUCTS WITH 2 YEARS EXPERIENCE.
B. APPLICATOR: COMPANY SPECIALIZING IN COMMERCIAL PAINTING AND FINISHING WITH 2 YEARS EXPERIENCE.
C. PRODUCT LABELS: INCLUDE MANUFACTURER'S NAME, TYPE OF PAINT, STOCK NUMBER, COLOR AND LABEL ANALYSIS ON LABEL OF CONTAINERS.

1.2 SUBMITTALS

A. PROVIDE PRODUCT DATA DESCRIBING PHYSICAL PERFORMANCE CRITERIA AND COMPOSITION ON ALL FINISHING PRODUCTS.
B. SUBMIT 2 SAMPLES, 12 BY 12 INCHES IN SIZE ILLUSTRATING RANGE OF COLORS AND TEXTURES SELECTED FOR EACH SURFACE FINISHING PRODUCT SCHEDULED.

09 91 00 - PAINTING (CONT)

1.3 FIELD SAMPLES

A. PROVIDE FIELD SAMPLE PANEL, 96 INCHES LONG BY 96 INCHES WIDE, ILLUSTRATING EACH COATING COLOR, TEXTURE, AND FINISH INTENDED FOR USE.
B. LOCATE WHERE DIRECTED.
C. ACCEPTED SAMPLE MAY REMAIN AS PART OF THE WORK.

1.4 DELIVERY, STORAGE, AND HANDLING

A. DELIVER PRODUCTS TO SITE IN SEALED AND LABELED CONTAINERS; INSPECT TO VERIFY ACCEPTANCE.
B. CONTAINER LABELS: INCLUDING TO INCLUDE MANUFACTURER'S NAME, TYPE OF PAINT, BRAND NAME, BRAND CODE, COVERAGE, SURFACE PREPARATION, DRYING TIME, CLEANUP, COLOR DESIGNATION, AND INSTRUCTIONS FOR MIXING AND/OR REDUCING.
C. STORE PAINT MATERIALS AT MINIMUM AMBIENT TEMPERATURE OF 45 DEGREES F AND A MAXIMUM OF 90 DEGREES F, IN WELL VENTILATED AREA, UNLESS REQUIRED OTHERWISE BY MANUFACTURER'S INSTRUCTIONS.
D. TAKE PRECAUTIONARY MEASURES TO PREVENT FIRE HAZARDS AND SPONTANEOUS COMBUSTION.

1.5 ENVIRONMENTAL REQUIREMENTS

A. DO NOT APPLY MATERIALS WHEN SURFACE AND AMBIENT TEMPERATURES ARE OUTSIDE THE RANGES REQUIRED BY PAINT MANUFACTURER.
B. PROVIDE CONTINUOUS VENTILATION AND HEATING FACILITIES TO MAINTAIN SURFACE AND AMBIENT TEMPERATURES ABOVE 45 DEGREES F FOR 24 HOURS BEFORE, DURING, AND 48 HOURS AFTER APPLICATION OF FINISHES, UNLESS REQUIRED OTHERWISE BY MANUFACTURER'S INSTRUCTIONS.
C. DO NOT APPLY EXTERIOR COATINGS DURING RAIN OR SNOW, OR WHEN RELATIVE HUMIDITY IS ABOVE 75 PERCENT, UNLESS REQUIRED OTHERWISE BY MANUFACTURER'S INSTRUCTIONS.
D. MINIMUM APPLICATION TEMPERATURES FOR LATEX PAINTS: 45 DEGREES F FOR INTERIORS; 50 DEGREES F FOR EXTERIOR; UNLESS REQUIRED OTHERWISE BY MANUFACTURER'S INSTRUCTIONS.
E. PROVIDE LIGHTING LEVEL OF 80 FT CANDLES MEASURED MID-_HEIGHT AT SUBSTRATE SURFACE.

1.6 EXTRA STOCK

A. PROVIDE A 1 GALLON CONTAINER OF EACH COLOR TO OWNER.
B. LABEL EACH CONTAINER WITH COLOR, COLOR NUMBER, TEXTURE, AND ROOM LOCATIONS, IN ADDITION TO THE MANUFACTURER'S LABEL.

1.7 SCAFFOLDS AND PROTECTION

A. PROVIDE ADEQUATE SAFE LADDERS, SCAFFOLDS, AND STAGES NECESSARY TO COMPLETE WORK.
B. PROTECT COMPLETED FINISH AND PAINT WORK, AND PROTECT ADJACENT FINISH SURFACES FROM PAINT, SPLATTER, SPILLS AND STAINS. USE ADEQUATE DROP CLOTHS AND MASKING PROCEDURES DURING PROGRESS OF WORK.

1.8 MANUFACTURERS

A. ACCEPTABLE MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS INDICATED, PROVIDE PRODUCTS OF ONE OF THE FOLLOWING:
   1. SHERWIN_WILLIAMS.
   2. P.P.G. INDUSTRIES.
   3. BENJAMIN MOORE.
   4. KELLEY-MOORE.
   5. GLIDDEN PROFESSIONAL.
B. MATERIALS SELECTED FOR COATING SYSTEMS FOR EACH TYPE SURFACE SHALL BE PRODUCT OF A SINGLE MANUFACTURER UNLESS OTHERWISE SPECIFIED. SECONDARY PRODUCTS SUCH AS LINSEED OIL, TURPENTINE AND SHELLACS SHALL BE FIRST QUALITY PRODUCTS OF A REPUTABLE MANUFACTURER.
C. PRODUCTS SPECIFIED IN SCHEDULE ARE THOSE OF GLIDDEN PROFESSIONAL AS A STANDARD OF QUALITY UNLESS OTHERWISE NOTED.

1.10 MATERIALS

A. COATINGS: READY MIXED, PROCESS PIGMENTS TO A SOFT PASTE CONSISTENCY, CAPABLE OF BEING READILY AND UNIFORMLY DISPERSED TO A HOMOGENEOUS COATING WITH GOOD FLOW AND BRUSHING PROPERTIES; CAPABLE OF DRYING OR CURING FREE OF STREAKS OR SAGS.
B. ACCESSORY MATERIALS: LINSEED OIL, SHELLAC, TURPENTINE, PAINT THINNERS AND OTHER MATERIALS NOT SPECIFICALLY INDICATED BUT REQUIRED TO ACHIEVE THE FINISHES SPECIFIED, OF COMMERCIAL QUALITY.
C. PATCHING MATERIALS: LATEX FILLER.

1.11 FINISHES

A. COLOR AND SHEEN: REFER TO FINISH LEGEND ON DRAWINGS.

1.12 INTERIOR PAINT SCHEDULE

A. DRYWALL (GYPSUM):
   1. ACRYLIC LATEX: GLIDDEN 1 COAT GLIDDEN PROFESSIONAL PVA WALL 1030 PRIMER, 2 COATS GLIDDEN PROFESSIONAL ULTRA-HIDE 250
B. GALVANIZED METAL:
   1. ACRYLIC LATEX: GLIDDEN: 1 COAT DEVOE COATINGS DEVFLEX DIRECT-TO-METAL 4020 PRIMER; SEMI-GLOSS: 2 COATS GLIDDEN PROFESSIONAL ULTRA-HIDE 250 5400 TOPCOAT.
C. SHOP PRIMED FERROUS METAL:
   1. ACRYLIC LATEX: GLIDDEN: 1 COAT DEVOE COATINGS DEVFLEX DIRECT-TO-METAL 4020 PRIMER, 2 COATS GLIDDEN PROFESSIONAL ULTRA-HIDE 250.

1.13 EXTERIOR PAINT SCHEDULE

A. SHOP PRIMED METAL DOORS, TRIM, PANELS AND MISCELLANEOUS SURFACES:
   1. HIGH PERFORMANCE COATING, WATER-BASED ACRYLIC:
      a. GLIDDEN: SEMI-GLOSS: 2 TOPCOATS DEVOE COATINGS DEVFLEX HIGH PERFORMANCE WB ACRYLIC 4216 OVER PREPARED SUBSTRATE.

1.14 EXAMINATION

A. VERIFY THAT SURFACES AND SUBSTRATE CONDITIONS ARE READY TO RECEIVE WORK AS INSTRUCTED BY THE PRODUCT MANUFACTURER.
B. EXAMINE SURFACES SCHEDULED TO BE FINISHED PRIOR TO COMMENCEMENT OF WORK. REPORT TO ARCHITECT ANY CONDITION THAT MAY POTENTIALLY AFFECT PROPER APPLICATION.
C. MEASURE MOISTURE CONTENT OF SURFACES USING AN ELECTRONIC MOISTURE METER. DO NOT APPLY FINISHES UNLESS MOISTURE CONTENT OF SURFACES ARE BELOW THE FOLLOWING MAXIMUMS
   1. GYPSUM WALLBOARD: 12 PERCENT.
D. TEST SHOP APPLIED PRIMERS FOR COMPATIBILITY WITH SUBSEQUENT COVER MATERIALS.
E. BEGINNING OF INSTALLATION MEANS ACCEPTANCE OF EXISTING SURFACES AND SUBSTRATE.

1.15 PREPARATION

A. REMOVE ELECTRICAL PLATES, HARDWARE, LIGHT FIXTURE TRIM, AND FITTINGS PRIOR TO PREPARING SURFACES OR FINISHING.
B. CORRECT MINOR DEFECTS AND CLEAN SURFACES WHICH AFFECT WORK OF THIS SECTION. REMOVE EXISTING COATINGS WHICH EXHIBIT LOOSE SURFACE DEFECTS.
C. IMPERVIOUS SURFACES: REMOVE MILDEW BY SCRUBBING WITH SOLUTION OF TRI_SODIUM PHOSPHATE AND BLEACH. RINSE WITH CLEAN WATER AND ALLOW SURFACE TO DRY.
D. GYPSUM BOARD SURFACES: LATEX FILL MINOR DEFECTS. SPOT PRIME DEFECTS AFTER REPAIR.
E. GALVANIZED SURFACES: REMOVE SURFACE CONTAMINATION AND OILS AND WASH WITH SOLVENT. APPLY COAT OF ETCHING PRIMER.
F. UNCOATED STEEL AND IRON SURFACES: REMOVE GREASE, SCALE, DIRT, AND RUST.
G. WHERE HEAVY COATINGS OF SCALE ARE EVIDENT, REMOVE BY WIRE BRUSHING OR SANDBLASTING; CLEAN BY WASHING WITH SOLVENT. APPLY A TREATMENT OF PHOSPHORIC ACID SOLUTION, ENSURING WELD JOINTS, BOLTS, AND NUTS ARE SIMILARLY CLEANED. SPOT PRIME PAINT AFTER REPAIRS.
H. SHOP PRIMED STEEL SURFACES: SAND AND SCRAPE TO REMOVE LOOSE PRIMER AND RUST. FEATHER EDGES TO MAKE TOUCH_UP PATCHES INCONSPICUOUS. CLEAN SURFACES WITH SOLVENT. PRIME BARE STEEL SURFACES.
I. SHOP FINISHED ITEMS: FINISH IN ACCORDANCE WITH AWI STANDARDS AND GUIDE LINES.
J. WOOD AND METAL DOORS SCHEDULED FOR PAINTING: SEAL TOP AND BOTTOM EDGES WITH PRIMER.

1.16 SURFACE PREPARATION OF PREVIOUSLY COATED SURFACES

A. GENERAL:
   1. REMOVE CRACKED AND DETERIORATED SEALANTS AND CAULKING.
   2. REMOVE CHALK DEPOSITS AND LOOSE, BLISTERED, PEELING, SCALING, OR CRAZED FINISH TO BARE BASE MATERIAL OR SOUND SUBSTRATE BY SCRAPING AND SANDING.
   3. WASH SURFACES WITH SOLUTION OF TSP TO REMOVE WAX, OIL, GREASE, AND OTHER FOREIGN MATERIAL; RINSE AND ALLOW TO DRY. EXERCISE CAUTION THAT TSP SOLUTION DOES NOT SOFTEN EXISTING COATING.
   4. ABRADE GLOSSY SURFACES BY SANDING OR WIPING WITH LIQUID DE-GLOSSER.
   5. REMOVE MILDEW AS SPECIFIED ABOVE.
   6. TEST COMPATIBILITY OF EXISTING COATINGS BY APPLYING NEW COATING TO SMALL, INCONSPICUOUS AREA. IF NEW COATINGS LIFT OR BLISTER EXISTING COATINGS, REQUEST RECOMMENDATION FROM ARCHITECT.
   7. APPLY SPECIFIED PRIMER TO SURFACES SCHEDULED TO RECEIVE COATINGS.
B. GYPSUM WALLBOARD:
   1. FILL CRACKS AND VOIDS WITH SPACKLING COMPOUND.
   2. APPLY PRIMER OVER BARE SURFACES AND NEWLY APPLIED TEXTURE COATINGS.
C. METAL:
   1. REMOVE RUST FROM SURFACES TO BARE METAL IN ACCORDANCE WITH SP3 "POWER TOOL CLEANING".
   2. EXERCISE CARE NOT TO REMOVE GALVANIZING.
   3. COMPLETE PREPARATION AS SPECIFIED FOR NEW WORK.

1.17 PROTECTION

A. PROTECT ELEMENTS SURROUNDING THE WORK OF THIS SECTION FROM DAMAGE OR DISFIGURATION.
B. REPAIR DAMAGE TO OTHER SURFACES CAUSED BY WORK OF THIS SECTION.
C. FURNISH DROP CLOTHS, SHIELDS, AND PROTECTIVE METHODS TO PREVENT SPRAY OR DROPPINGS FROM DISFIGURING OTHER SURFACES.
D. REMOVE EMPTY PAINT CONTAINERS FROM SITE.

11 13 00 - LOADING DOCK EQUIPMENT (CONT)

4. CONSTRUCTION: CONSISTING OF SINGLE- OR DOUBLE-PLY, COATED, FABRIC-COVERED, URETHANE-FOAM CORE WITH SURFACE-APPLIED FRAME, FABRICATE JAMB AND HEAD PADS OF SAME DEPTH AND SIZED FOR OPENING WIDTH.
   - WOOD SUPPORT FRAME: FACTORY PAINTED, WITH STEEL MOUNTING BRACKETS.
   - STEEL SUPPORT FRAME: STEEL CHANNEL FRAME OF MANUFACTURER'S STANDARD WEIGHT, SHAPE, AND FINISH, WITH STEEL MOUNTING HARDWARE.
   - COVER FABRIC: HYPALON-COATED NYLON WITH MINIMUM TOTAL WEIGHT OF 48 OZ/SQ YD.
   - GUIDE STRIPS: 4 PLY, FABRIC COATED, NYLON GUIDE STRIPS ON JAMB PADS.
   - FLOAT PROTECTORS: PROTECTORS ON FACE OF JAMB PADS OF OVERLAPPING LAYERS OF COATED FABRIC ATTACHED TO BASE FABRIC.

33 17 13 - PRECAST CONCRETE SITE ACCESSORIES

1.1 SECTION INCLUDES

A. PRECAST CONCRETE PARKING BUMPERS.
B. PRECAST CONCRETE SPLASH BLOCKS.
C. PRECAST CONCRETE MECHANICAL UNIT SUPPORT PADS.

1.2 PRECAST CONCRETE WHEEL STOPS

A. QUALITIES: PRECAST CONCRETE WHEEL STOPS, REINFORCED AND HAVING 2 PRE_ DRILLED PIN HOLES AND HAVING 2 CAST_ IN ANCHOR PINS.
   1. CONCRETE: NORMAL WEIGHT CONCRETE, MINIMUM 4000 PSI 28_ DAY COMPRESSIVE STRENGTH.
   2. REINFORCING: 2 CONTINUOUS NO. 3 DEFORMED REINFORCEMENT BARS.
   3. SIZE: 8_ INCHES HIGH BY 8 INCHES WIDE BY 72 INCH LENGTH.
   4. ANCHOR PINS: 5/8 INCH DEFORMED BAR, 2 FOR EACH WHEEL STOP, EXTENDING A MINIMUM OF 3 INCHES BELOW BOTTOM OF WHEEL STOP.
B. STANDARDS:
   1. CONCRETE: ASTM C 94.
   2. REINFORCING: ASTM A 615, GRADE 40.

1.2 PRECAST CONCRETE SPLASH BLOCKS AND MECHANICAL UNIT PADS

A. PRECAST CONCRETE, REINFORCED WITH MANUFACTURER'S STANDARD MESH OR DEFORMED BARS.
B. CONCRETE: NORMAL WEIGHT, MINIMUM 4000 PSI 28 DAY COMPRESSIVE STRENGTH.
C. SIZE: AS INDICATED ON DRAWINGS.

1.4 PREPARATION _ WHEEL STOPS

A. VERIFY LAYOUT OF WHEEL STOP LOCATIONS WITH PAVEMENT MARKING LAYOUT.
B. THOROUGHLY CLEAN SURFACES TO RECEIVE WHEEL STOPS FREE OF DIRT, SAND, OIL, GREASE OR OTHER FOREIGN MATTER.

1.5 INSTALLATION _ WHEEL STOPS

A. INSTALL A PRECAST WHEEL STOP AT EACH PARKING SPACE INDICATED ON DRAWINGS.
B. INSTALL WHEEL STOPS WITH ANCHORS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
C. LEAVE WHEEL STOPS SECURELY ANCHORED AND IN PROPER ALIGNMENT.

1.6 INSTALLATION _ SPLASH BLOCKS AND MECHANICAL UNIT PADS

A. PLACE BLOCKS AND PADS ON SMOOTH, EVEN TOPSOIL_ PLACE LEVEL AND SOLIDLY SUPPORTED.

32 31 13 - CHAIN LINK FENCES AND GATES

1.1 CHAIN-LINK FENCE FABRIC

A. GENERAL: PROVIDE FABRIC IN ONE-PIECE HEIGHTS MEASURED BETWEEN TOP AND BOTTOM OF OUTER EDGE OF SELVAGE KNUCKLE OR TWIST. COMPLY WITH CLFMI PRODUCT MANUAL AND WITH REQUIREMENTS INDICATED BELOW:
   1. STEEL WIRE FABRIC: MINIMUM DIAMETER OF 0.148 INCH.
      a. MESH SIZE: 2 INCHES, UNLESS NOTED OTHERWISE ON DRAWINGS.
      b. UNLESS NOTED OTHERWISE ON DRAWINGS, FABRIC SHALL BE ZINC-COATED: ASTM A 392, TYPE II, CLASS 1, 1.2 OZ/SQ.FT. ZINC COATING APPLIED BEFORE WEAVING.
      c. VINYL COATING WHERE INDICATED: PVC COATING ON CLASS 2b WIRE, THERMALLY FUSED AND BONDED, COATED SELVAGE ENDS OF FABRIC THAT IS METALLIC COATED BEFORE THE WEAVING PROCESS WITH MANUFACTURER'S STANDARD CLEAR PROTECTIVE COATING.
      d. SELVAGE: KNUCKLED AT BOTH SELVAGES.

1.2 FENCE FRAMING

A. POSTS AND RAILS: COMPLY WITH ASTM F 1043 FOR FRAMING, INCLUDING RAILS, BRACES, AND LINE TERMINAL; AND CORNER POSTS. PROVIDE MEMBERS WITH MINIMUM DIMENSIONS AND WALL THICKNESS ACCORDING TO ASTM F 1043 OR ASTM F 1083 BASED ON THE FOLLOWING:
   1. FABRIC HEIGHT: 8 FEET OR AS OTHERWISE INDICATED ON DRAWINGS.
   2. LIGHT INDUSTRIAL STRENGTH: MATERIAL GROUP IC-1, ROUND STEEL PIPE, ELECTRIC-RESISTANCE-WELDED PIPE.
      a. LINE POST: 2.375 INCHES IN DIAMETER.
      b. END, CORNER AND PULL POST: 2.875 INCHES.
   3. HORIZONTAL FRAMEWORK MEMBERS: INTERMEDIATE TOP AND BOTTOM RAILS COMPLYING WITH ASTM F 1043.
      a. TOP RAIL: 1.66 INCHES IN DIAMETER.
   4. BRACE RAILS: COMPLY WITH ASTM F 1043.
   5. UNLESS NOTED OTHERWISE ON DRAWINGS, STEEL FRAMING SHALL BE PROVIDED WITH A MINIMUM ZINC COATING PER ASTM A 123 OR A 653.
      a. TYPE A, CONSISTING OF NOT LESS THAN MINIMUM 2.0-OZ./SQ. FT. AVERAGE ZINC COATING PER ASTM A 123 OR A 924.
   6. PROVIDE VINYL COATED STEEL FRAMING WHERE VINYL COATED FABRIC IS INDICATED: PROVIDE OUTER COATING OF PVC ON FRAMING STEEL IN ACCORDANCE WITH ASTM F 1043, 7.3, IN COLOR TO MATCH FABRIC.

A. FOAM-PAD DOCK SEALS

1. DOCK SEALS CONSISTING OF FABRIC-COVERED FOAM PADS DESIGNED TO COMPRESS TO 4 TO 5 INCHES UNDER PRESSURE OF TRUCK BODY TO FORM AN AIRTIGHT SEAL AT JAMBS AND HEAD OF LOADING DOCK OPENINGS; OF TYPE, SIZE, AND CONSTRUCTION INDICATED.
2. MANUFACTURERS
   - CHASE DOORS
   - KELLEY COMPANY
   - MCGUIRE, W. B. CO.
   - PIONEER LOADING DOCK COMPANY
   - RITE-HITE CORPORATION
   - SERCO
3. ADJUSTABLE HEAD PAD: MANUFACTURERS' STANDARD HARDWARE AND TENSION SPRING OR COUNTERWEIGHT MECHANISM FOR ADJUSTING HEIGHT OF PAD.

B. RECESSED DOCK LEVELERS

1. RECESSED, HINGED-LIP-TYPE DOCK LEVELERS DESIGNED FOR PERMANENT INSTALLATION IN CONCRETE PITS PREFORMED IN THE EDGE OF LOADING PLATFORM; OF TYPE, FUNCTION, OPERATION, CAPACITY, SIZE, AND CONSTRUCTION INDICATED; AND COMPLETE WITH CONTROLS, SAFETY DEVICES, AND ACCESSORIES REQUIRED.
2. MANUFACTURERS
   - BLUE GIANT EQUIPMENT CORPORATION
   - KELLEY COMPANY
   - MCGUIRE W. B. CO.
   - PIONEER LOADING DOCK EQUIPMENT
   - RITE HITE CORPORATION
   - SERCO
3. QUALITY STANDARD: MH-30.1, "SAFETY, PERFORMANCE AND TESTING OF DOCK LEVELING DEVICES"
4. RATED CAPACITY: CAPABLE OF SUPPORTING TOTAL GROSS LOAD OF 35,000 LB AND RATED CAPACITY OR DYNAMIC RATING (REFER TO DRAWINGS FOR LOCATIONS) WITHOUT PERMANENT DEFLECTION OR DISTORTION, AS DETERMINED BY ACTUAL TESTS ACCORDING TO MH-30.1.

C. FOAM-PAD DOCK SEALS

1. DOCK SEALS CONSISTING OF FABRIC-COVERED FOAM PADS DESIGNED TO COMPRESS TO 4 TO 5 INCHES UNDER PRESSURE OF TRUCK BODY TO FORM AN AIRTIGHT SEAL AT JAMBS AND HEAD OF LOADING DOCK OPENINGS; OF TYPE, SIZE, AND CONSTRUCTION INDICATED.
2. MANUFACTURERS
   - CHASE DOORS
   - KELLEY COMPANY
   - MCGUIRE, W. B. CO.
   - PIONEER LOADING DOCK COMPANY
   - RITE-HITE CORPORATION
   - SERCO
3. ADJUSTABLE HEAD PAD: MANUFACTURERS' STANDARD HARDWARE AND TENSION SPRING OR COUNTERWEIGHT MECHANISM FOR ADJUSTING HEIGHT OF PAD.

09 90 00 - MISCELLANEOUS SPECIALTIES

1.1 SUBMITTALS

A. PRODUCT DATA: INCLUDING ALL PERTINENT PERFORMANCE CHARACTERISTICS AND CRITERIA.

1.2 PRODUCTS

A. FIRE CONTROL KEY BOX: PROVIDE RECESSED FIRE DEPARTMENT KEY CONTROL BOX, EQUAL TO MODEL 3200 BY KNOX BOX.
   1. PROVIDE KNOX LOCKS AS REQUIRED BY LOCAL FIRE DEPARTMENT.

11 13 00 - LOADING DOCK EQUIPMENT

1.1 THIS SECTION INCLUDES THE FOLLOWING: DOCK BUMPERS; DOCK LEVELERS; DOCK SEALS

1.2 SUBMITTALS

A. PRODUCT DATA: INCLUDE CONSTRUCTION DETAILS, RATED CAPACITIES, OPERATING CHARACTERISTICS. DIMENSIONS OF INDIVIDUAL COMPONENTS AND PROFILES AND FINISHES.
B. MAINTENANCE DATA

1.2 PRODUCTS

A. DOCK BUMPERS

1. MANUFACTURERS
   - DURABLE CORPORATION
   - KELLEY COMPANY
   - PAWLING CORPORATION
   - PIONEER LOADING DOCK EQUIPMENT
   - RITE-HITE CORPORATION
   - SERCO
2. LAMINATED TREAD BUMPERS: FABRICATED FROM MULTIPLE, UNIFORMLY THICK PLIES CUT FROM FABRIC-REINFORCED RUBBER TIRES. LAMINATE PLIES UNDER PRESSURE ON NOT LESS THAN 2 3/4-INCH DIAMETER, STEEL SUPPORTING RODS THAT ARE WELDED AT ONE END TO 3/4-INCH THICK, STRUCTURAL STEEL END ANGLE AND SECURED WITH A NUT AND ANGLE AT THE OTHER END. FABRICATE ANGLES WITH PREDRILLED ANCHOR HOLES AND SIZED TO PROVIDE NOT L

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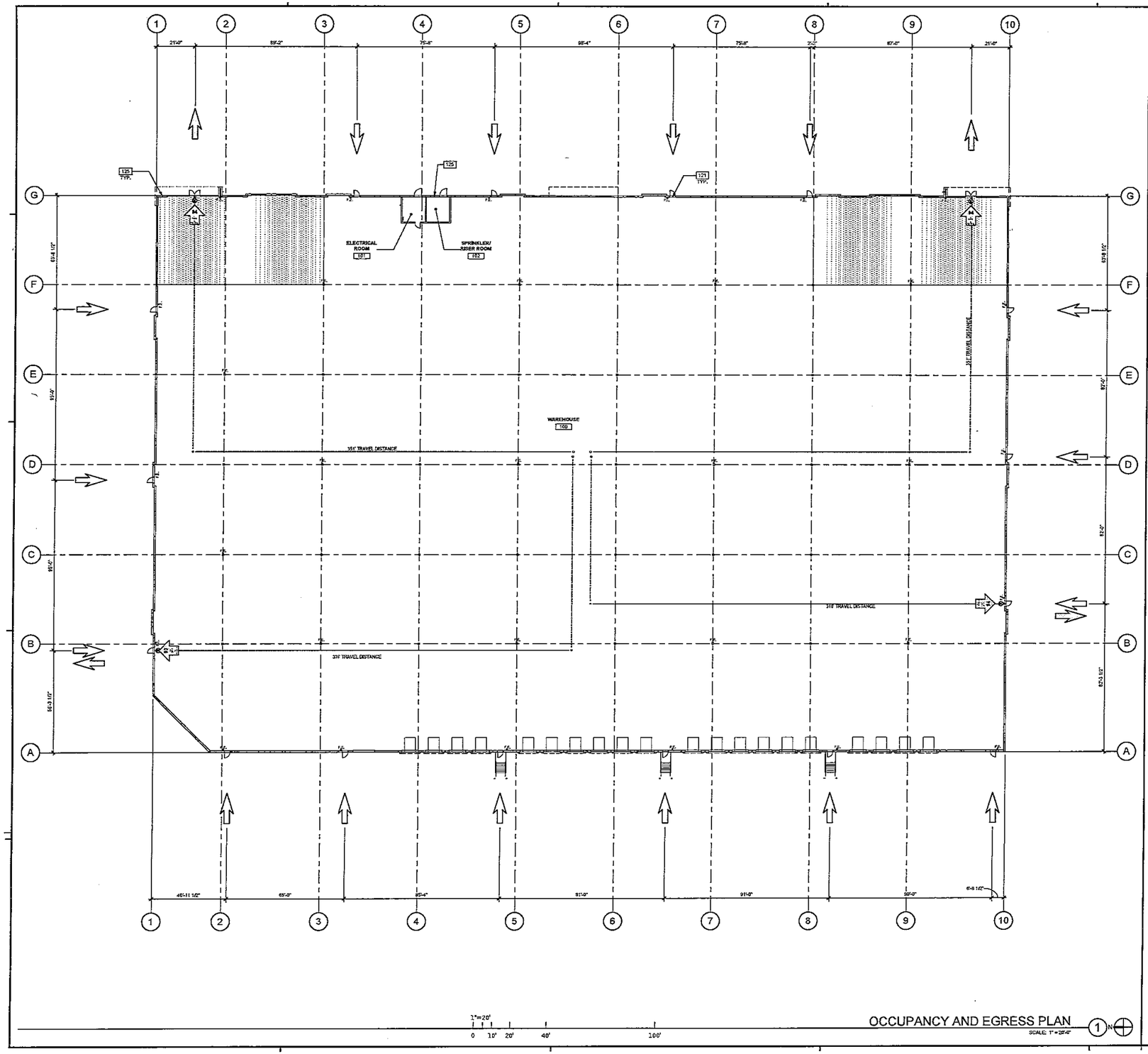


OCCUPANCY AND EGRESS PLAN

SCALE: 1" = 20'-0"

## GENERAL NOTES

SEE SHEET A0.2 FOR ADDITIONAL GENERAL NOTES

1. SEE SHEETS A0.1 AND/OR A0.2 FOR ADDITIONAL GENERAL NOTES.
2. POSTED SIGNS IN AN ASSEMBLY OCCUPANCY SHALL BE OF AN APPROVED LEGIBLE PERMANENT DESIGN AND SHALL BE MAINTAINED BY THE OWNER OR AUTHORIZED AGENCY.
3. ILLUMINATION SHALL BE PROVIDED BY THE MEANS OF EGRESS IN ACCORDANCE WITH SECTION 1008.2 UNDER EMERGENCY POWER. MEANS OF EGRESS ILLUMINATION SHALL COMPLY WITH SECTION 1008.3.
4. PROVIDE BATTERY BACKUP ILLUMINATED EXTERIOR AREA OF ASSISTED RESCUE SIGN AND TACTILE SIGN IN COMPLIANCE WITH ICC A117.1 AT ALL EXIT DOORS WITH ASSOCIATED EXTERIOR AREA FOR ASSISTED RESCUE.
5. PROVIDE ONE FIRE EXTINGUISHER (WITH MINIMUM RATING OF 10A:80B:C FOR EVERY 3,000 SQ. FT.) AND LOCATE SO NO TRAVEL DISTANCE TO A FIRE EXTINGUISHER EXCEEDS 75 FEET. MOUNT TOP OF THE FIRE EXTINGUISHER NOT TO EXCEED 48" AFF.
6. COLUMN MOUNTED FIRE EXTINGUISHER (CLASS A), 10-A:80B:C, NOMINAL CAPACITY WITH BRACKET.
7. PROVIDE WALL-HUNG FIRE EXTINGUISHERS (UL-RATED 10-A:80B:C, 10LB.) IN THE WAREHOUSE AS REQUIRED BY CODE AND PER FIRE MARSHALL FINAL INSPECTION, 75'-0" MAXIMUM DISTANCE PER 906.3.
8. AREA OF RESCUE ASSISTANCE AT DESIGNATED EGRESS DOORS, TYP.
9. PROVIDE KNOX BOX AT FRONT ENTRANCE AND AT FACP ROOM DOOR. LOCATION TO BE VERIFIED WITH A.H.J.

## KEYNOTES:

SEE SHEET A0.2 FOR GENERAL NOTES

ALL REQUIRED EXITS TO RECEIVE WALL-MOUNTED TACTILE EXIT SIGN WITH THE WORD "EXIT" (14 A03.1)

ALL EXTERIOR WALLS SEPARATING THE EXTERIOR AREA OF ASSISTED RESCUE FROM INTERIOR ARE TO HAVE A MIN. FIRE-RESISTANCE RATING OF 1 HOUR (14 A6.3)

121 COORDINATE WITH ELEC. DRAWINGS FOR PLACEMENT OF EXIT SIGNS. PROVIDE WALL-MOUNTED TACTILE SIGN WITH THE WORDS "AREA OF REFUGE" IN FRONT OF EXITS WITH AN AREA OF REFUGE.

125 PROVIDE KNOX BOX AT FRONT ENTRANCE AND AT FACP ROOM DOOR. LOCATION TO BE VERIFIED WITH A.H.J.

## LEGEND

- PROPOSED FUTURE OFFICE AREA (N.I.C.)
- REQUIRED EXIT AND FIRE DEPARTMENT ACCESS.
- FIRE DEPARTMENT ACCESS.
- MAXIMUM TRAVEL DISTANCE.
- F.E. FIRE EXTINGUISHER
- WALL-MOUNTED ILLUMINATED EMERGENCY EXIT SIGN ABOVE DOOR WITH BATTERY POWERED BACKUP. SHADED QUADRANT INDICATES FACE OF LETTERING.

ADDITIONAL DIRECTIONAL EXIT SIGNS MAY BE REQUIRED PRIOR TO FINAL INSPECTION AND SUBJECT TO BUILDING INSPECTOR.

## EGRESS ANALYSIS

| FUNCTION SPACE AND OCCUPANCY | (N) GROSS AREA (SF) | (F) AREA PER OCC. FACTOR 1004.1 | (OCC.) = (N)/(F) OCCUPANT LOAD | NUMBER OF EXITS REQ'D 1006 | DOORS AND OTHER EGRESS COMPONENTS WIDTH REQ'D 1005.3 | NUMBER OF 32" CLR. EXITS PROVIDED PER PLANS | NUMBER OF 44" CLR. EXITS PROVIDED PER PLANS | NUMBER OF 84" CLR. EXITS PROVIDED PER PLANS | TOTAL DOOR WIDTH PROVIDED |
|---|---|---|---|---|---|---|---|---|---|
| WAREHOUSE S-1 | 165,466 | 500 | 291 | 2 | 291" TO 43.65" | 2 | - | 2 | 192" |

## MAX. TRAVEL DISTANCE TO EXITS

MAXIMUM TRAVEL DISTANCE TO EXITS (TABLE 1017.2 SPRINKLERED BUILDING)

S-1/STORAGE (MODERATE-HAZARD WAREHOUSE) ..... 400 FEET MAX.

1006.2.1.1 NUMBER OF DOORS REQUIRED NOT LESS THAN ONE ACCESS DOOR SHALL BE PROVIDED IN EACH 100 LINEAR FEET (30 480 MM), OR FRACTION THEREOF, OF THE EXTERIOR WALLS THAT FACE REQUIRED FIRE APPARATUS ACCESS ROADS. THE REQUIRED ACCESS DOORS SHALL BE DISTRIBUTED SUCH THAT THE LINEAL DISTANCE BETWEEN ADJACENT ACCESS DOORS DOES NOT EXCEED 100 FEET (30 480 MM).

1609.7.2 SEPARATION
EXTERIOR WALLS SEPARATING THE EXTERIOR AREA OF ASSISTED RESCUE FROM THE INTERIOR OF THE BUILDING SHALL HAVE A MINIMUM FIRE-RESISTANCE RATING OF 1 HOUR, RATED FOR EXPOSURE TO FIRE FROM THE INSIDE. THE FIRE-RESISTANCE-RATED EXTERIOR WALL CONSTRUCTION SHALL EXTEND HORIZONTALLY NOT LESS THAN 10 FEET (3048 MM) BEYOND THE LANDING ON EITHER SIDE OF THE LANDING OR EQUIVALENT FIRE-RESISTANCE-RATED CONSTRUCTION IS PERMITTED TO EXTEND OUT PERPENDICULAR TO THE EXTERIOR WALL NOT LESS THAN 4 FEET (1220 MM) ON THE SIDE OF THE LANDING. THE FIRE-RESISTANCE-RATED CONSTRUCTION SHALL EXTEND VERTICALLY FROM THE GROUND TO A POINT NOT LESS THAN 10 FEET (3048 MM) ABOVE THE FLOOR LEVEL OF THE AREA FOR ASSISTED RESCUE OR TO THE ROOF LINE, WHICHEVER IS LOWER. OPENINGS WITHIN SUCH FIRE-RESISTANCE-RATED EXTERIOR WALLS SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 716.

Bids of Brink Design Firm Registration No. 184-004699

WARE MALCOMB
ARCHITECTURE CIVIL ENGINEERING
PLANNING FRAMING
INTERIORS MEASUREMENT
1315 23rd St #410
Oak Brook, IL 60523
P 630.990.3001

DRAFT A. BRANDENBURG 001-012662
EXP: 11 - 30 - 2022

THE MISSNER GROUP

MISSNER GROUP - PALATINE
2250 NORTH RAND ROAD
PALATINE, ILLINOIS 60074

OCCUPANCY AND EGRESS PLAN

| DATE | REMARKS |
|---|---|
| 2022.03.04 | PROGRESS PACKAGE |
| 2022.04.06 | PERMIT SET |

PAPM: M. PULA
DRAWN BY: S.R.
JOB NO.: CH21-0183-00

SHEET
A0.5

Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)

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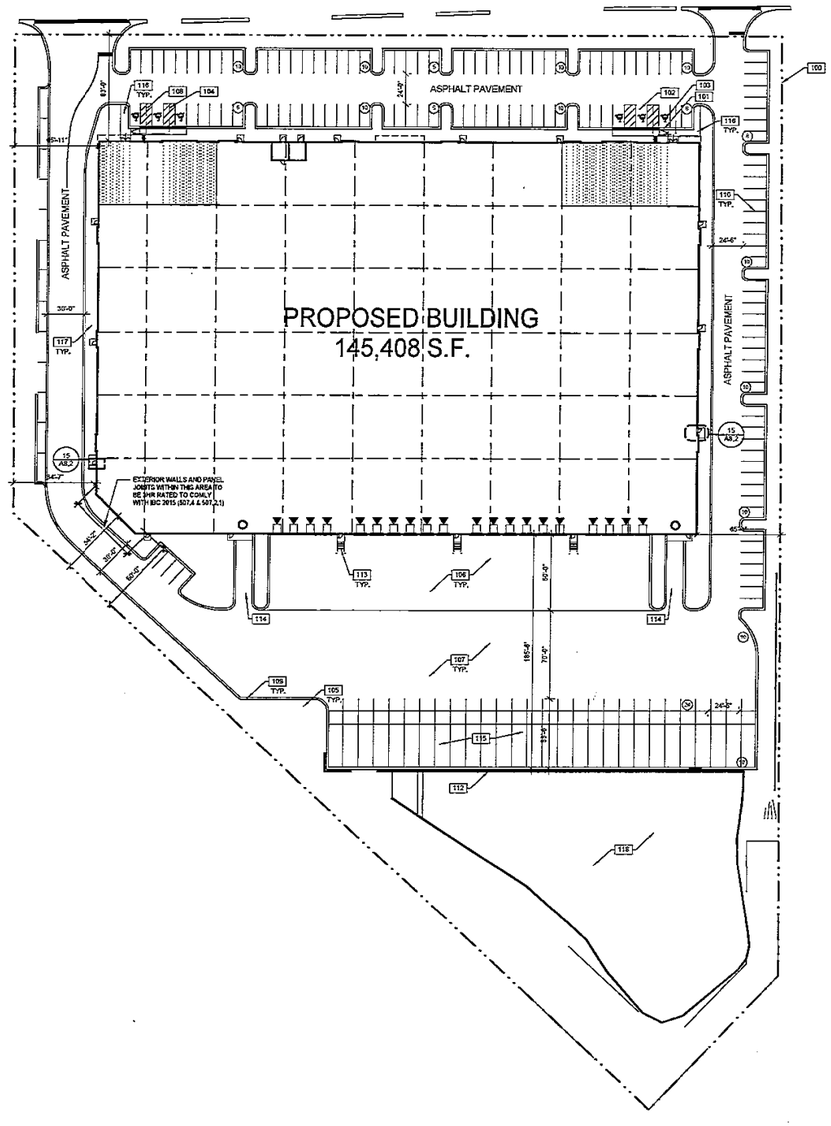
NORTH RAND ROAD




1"=40'
0 20' 40' 80' 200'

SITE PLAN (FOR REFERENCE ONLY)
SCALE: 1" = 40'-0"

## KEYNOTES:

SEE SHEET A0.2 FOR GENERAL NOTES

100. PROPERTY LINE.
101. ACCESSIBLE ENTRY SIGNAGE.
102. ACCESSIBLE PARKING STALL WITH SIGNAGE.
103. VAN ACCESSIBLE PARKING STALL WITH SIGNAGE.
104. ACCESSIBLE PATH OF TRAVEL, 1:20 MAX. SLOPE, 2% MAX. CROSS S
105. LANDSCAPE AND IRRIGATION AREA, REFER TO CIVIL LANDSCAPE D
106. CONCRETE PAVEMENT.
107. ASPHALT PAVEMENT.
108. ACCESSIBLE LOADING ZONE.
109. 6" CONCRETE CURB.
110. PAINTED PARKING STRIPING PER CITY STANDARDS.
111. ACCESS RAMP FOR D.I.D. DOOR
112. CONCRETE RETAINING WALL.

## LEGEND

- ACCESSIBLE PATH OF TRAVEL, 1:20 MAX. SLOPE, 2% MAX. CROSS SLOPE.
- PROPERTY LINE.
- T — TRANSFORMER WITH CONCRETE PAD. (PROVIDE PROTECTION BOLLARDS PER LOCAL UTILITY OR PUBLIC WORK STANDARDS) (REFER TO ELEC FOR TRANSFORMER LOCATION)
- 1 — PARKING STALL COUNT TOTAL
- DOCK HIGH TRUCK DOOR
- GRADE LEVEL TRUCK DOOR

State of Illinois Dept.Fin.Professional No. 184.004089
WARE MALCOMB
ARCHITECTURE PLANNING CIVIL ENGINEERING BRANDING
1515 Stanley #410 Oak Brook, IL 60523
GRANT A. BRANDENBURG 001-020642 REGISTERED ARCHITECT
EXP: 11 - 30 - 2022
THE MISSNER GROUP

SITE PLAN (FOR REFERENCE ONLY)

| DATE | REMARKS |
|---|---|
| 2022.03.04 | |
| 2022.04.08 | PERMIT SET |

| | |
|---|---|
| PM/PM: | M. PULA |
| DRAWN BY: | S.R. |
| JOB NO.: | CH121-0180-0 |

SHEET
A1.1

MISSNER GROUP - PALATINE
2250 NORTH RAND ROAD

Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)

CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED




LEGEND

PROPOSED FUTURE OFFICE AREA (N.I.C.)

WALL LEGEND

CONCRETE WALL

COLD FORMED STUD FRAMING WALL CONSTRUCTION. SEE NOTES ON PLAN FOR FIRE RATING

WARE MALCOMB

State of Illinois Design Firm Registration No. 184-004069

ARCHITECTURE PLANNING INTERIORS
CIVIL ENGINEERING BRANDING BUILDING ASSESSMENT

1115 22nd St. #410
Oak Brook, IL 60523

GRANT A. BRANDENBURG
081-020644
LICENSED ARCHITECT
EXP: 11 - 30 - 2022

THE MISSNER GROUP

MISSNER GROUP - PALATINE
2250 NORTH RAND ROAD
PALATINE, ILLINOIS 60074

OVERALL FLOOR PLAN

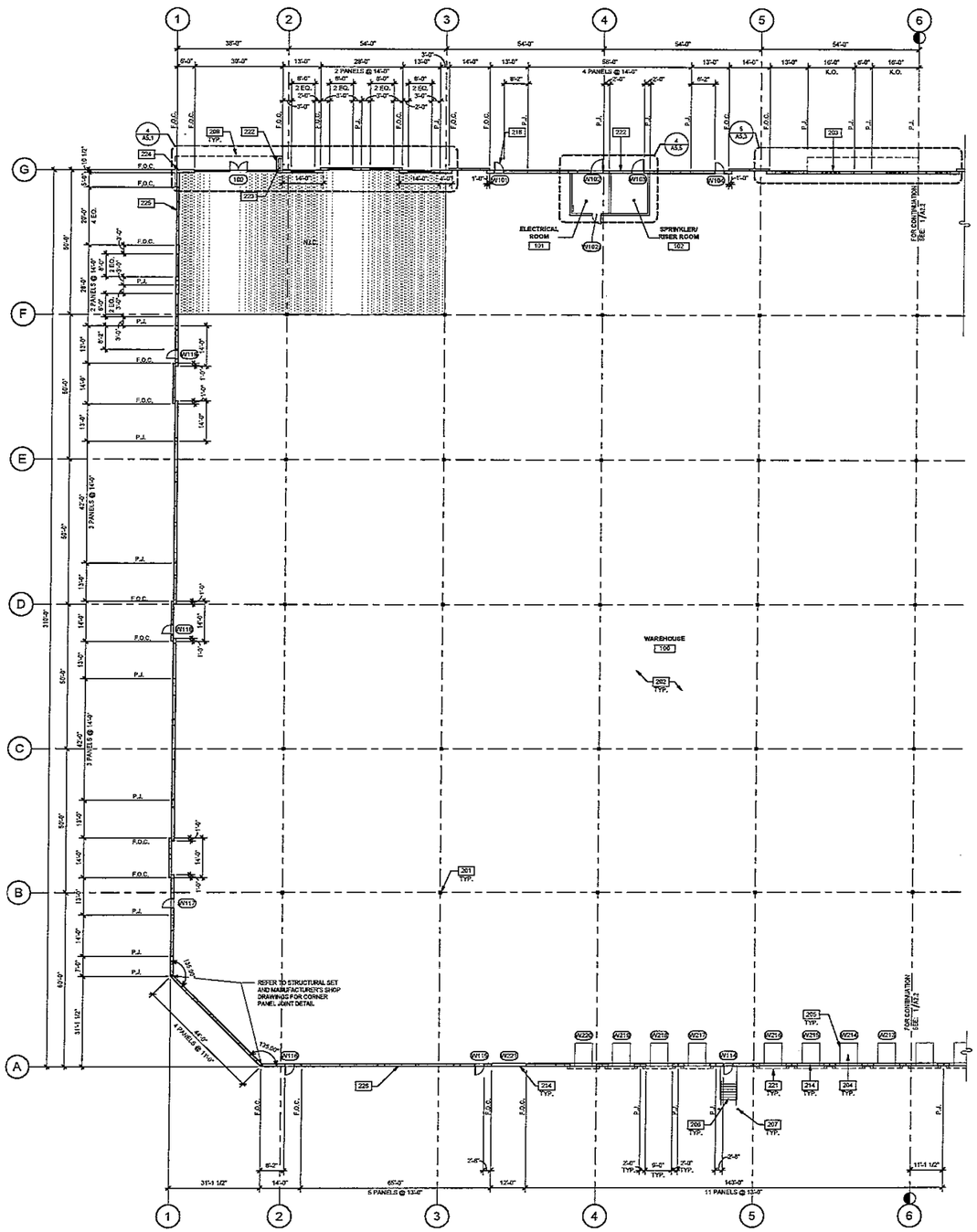
| DATE | REMARKS |
|---|---|
| 2022.03.04 | PROGRESS PACKAGE |
| 2022.04.08 | PERMIT SET |

| | |
|---|---|
| PA/PM: | M. PUIA |
| DRAWN BY: | S.R. |
| JOB NO.: | CH21-0183-0 |

SHEET

A2.0

Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)




PARTIAL FLOOR PLAN

SCALE: 1/16" = 1'-0"

1/16"=1'-0"

0 8' 16' 32' 64'

## KEYNOTES:

SEE SHEET A0.2 FOR GENERAL NOTES

201 STRUCTURAL STEEL COLUMN. REFER TO STUCTURAL.
202 CONCRETE SLAB. PROVIDE VAPOR RETARDER AT OFFICE AREA PER SOILS REPORT. PROVIDE SEALER FOR CONCRETE FLOOR AREA IN WAREHOUSE. REFER TO STRUCTURAL DRAWINGS.
203 KNOCK-OUT PANEL FOR FUTURE WINDOWS OR DOORS.
204 10'X 8' MECHANICAL DOCK LEVELER, 35,000 LBS DYNAMIC CAPACITY, MANUALLY OPERATED (SPRING ASSISTED). REFER TO A0.2 ENVELOPE ASSEMBLY NOTES.
205 DOCK PIT, DOCK SEAL, LEVELER AND DOCK BUMPERS, TYP; U.N.O, REFER TO A0.2, ENVELOPE ASSEMBLY NOTES.
206 EXTERIOR STEEL STAIR, ALL COMPONENTS GALVANIZED.
207 STEEL BOLLARD, CONCRETE-FILLED PAINTED SAFETY YELLOW.
209 OUTLINE OF CANOPY ABOVE.
214 HIGH LIFT OVERHEAD SECTIONAL DOOR, REFER TO A0.2, ENVELOPE ASSEMBLY NOTES.
216 SERVICEMAN DOORS. COLOR: TO MATCH ADJACENT CONCRETE PANEL COLOR.
221 DOCK SEAL
222 PROVIDE KNOX BOX AT FRONT ENTRANCE AND AT THE FACP ROOM DOOR. LOCATION TO BE VERIFIED WITH AHJ.
223 ENTRY PORTAL - PRE-FINISH ACM PANEL RAINSCREEN SYSTEM. REFER TO A0.2, ENVELOPE ASSEMBLY NOTES.
224 WRAP REVEALS AT EXPOSED PANEL ENDS - TYP.
225 ALUMINUM STOREFRONT SYSTEM WITH 1" INSULATED GLASS. REFER TO A0.2, ENVELOPE, ASSEMBLY NOTES FOR GLAZING SPECIFICATION.
226 PRECAST CONCRETE WALLS, PAINTED.

## LEGEND

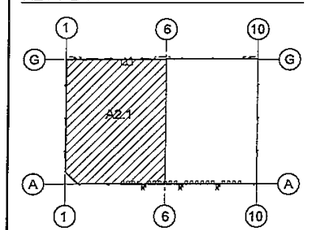
PROPOSED FUTURE OFFICE AREA (N.I.C.)

## WALL LEGEND

CONCRETE WALL

COLD FORMED STUD FRAMING WALL CONSTRUCTION. SEE NOTES ON PLAN FOR FIRE RATING

## KEY PLAN




N

NOT TO SCALE

CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCE

WARE MALCOMB
ARCHITECTURE PLANNING CIVIL ENGINEERING BRANDING
1515 22nd St #450 Oak Brook, IL 60523

State of Illinois Design Firm Registration No. 184-004869

GRANT A BRANDENBURG 001-020942 REGISTERED ARCHITECT STATE OF ILLINOIS
EXP: 11 - 30 - 2022

THE MISSNER GROUP

MISSNER GROUP - PALATINE
2250 NORTH RAND ROAD

PARTIAL FLOOR PLAN

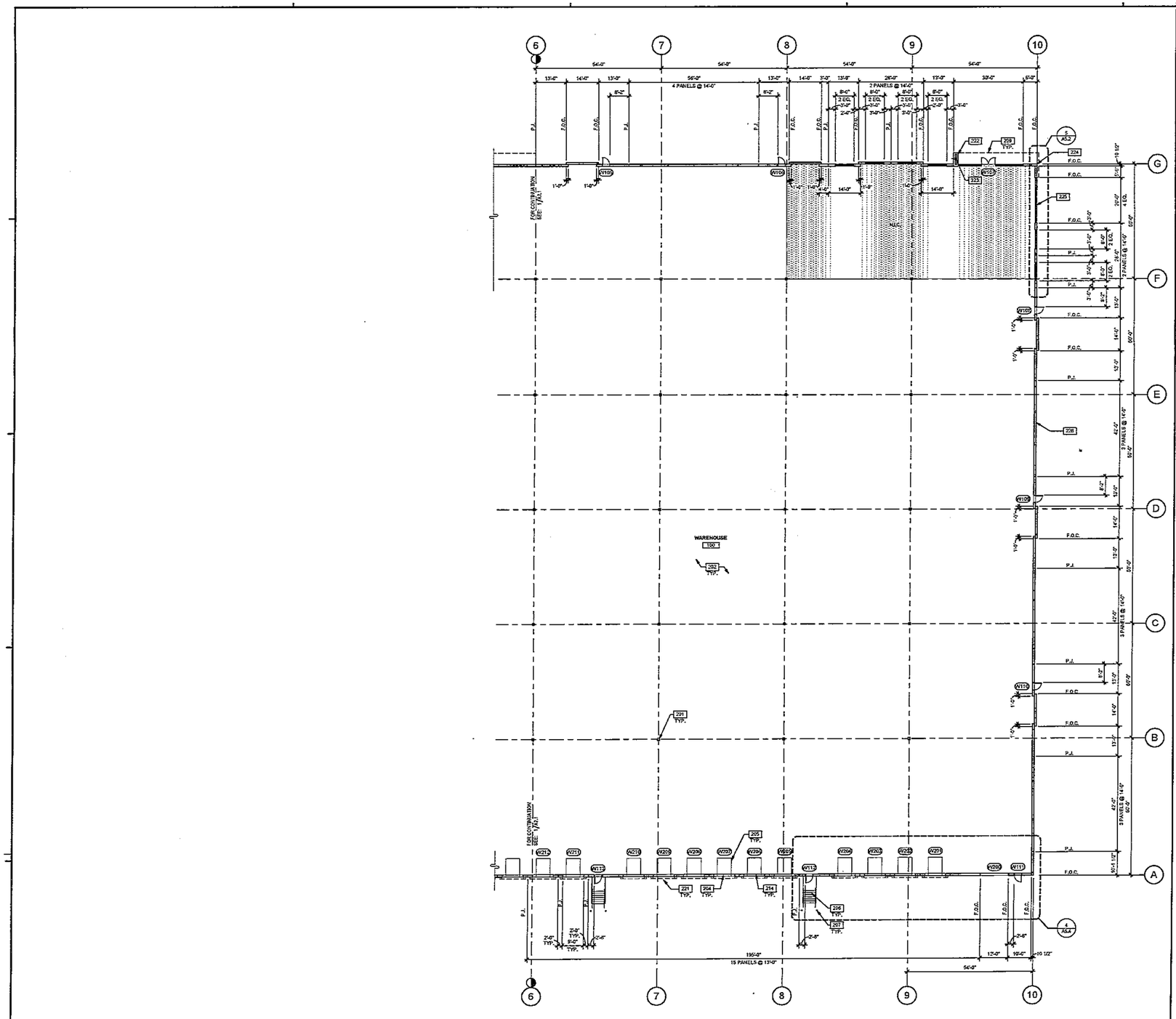
| REMARKS | DATE |
|---|---|
| PERMIT SET | 03/22/2022 |

| | |
|---|---|
| PAPER: | M. PULA |
| DRAWN BY: | S.R. |
| JOB NO.: | CH21-0193-0 |

SHEET
A2.1

Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)

CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCE




PARTIAL FLOOR PLAN

SCALE: 1/16" = 1'-0"

## KEYNOTES:

SEE SHEET A0.2 FOR GENERAL NOTES

201 STRUCTURAL STEEL COLUMN, REFER TO STUCTURAL.

202 CONCRETE SLAB, PROVIDE VAPOR RETARDER AT OFFICE AREA PER SOILS REPORT. PROVIDE SEALER FOR CONCRETE FLOOR AREA IN WAREHOUSE. REFER TO STRUCTURAL DRAWINGS.

204 6'X 8' MECHANICAL DOCK LEVELER, 35,000 LBS DYNAMIC CAPACITY, MANUALLY OPERATED (SPRING ASSISTED). REFER TO A0.2 ENVELOPE ASSEMBLY NOTES.

205 DOCK PIT, DOCK SEAL, LEVELER AND DOCK BUMPERS, TYP. U.N.O. REFER TO A0.2, ENVELOPE ASSEMBLY NOTES.

206 EXTERIOR STEEL STAIR, ALL COMPONENTS GALVANIZED.

207 STEEL BOLLARD, CONCRETE-FILLED PAINTED SAFETY YELLOW.

208 OUTLINE OF CANOPY ABOVE.

214 HIGH LIFT OVERHEAD SECTIONAL DOOR, REFER TO A0.2, ENVELOPE ASSEMBLY NOTES.

221 DOCK SEAL

222 PROVIDE KNOX BOX AT FRONT ENTRANCE AND AT THE FACP ROOM DOOR. LOCATION TO BE VERIFIED WITH AHJ.

223 ENTRY PORTAL - PRE-FINISH ACM PANEL RAINSCREEN SYSTEM. REFER TO A0.2, ENVELOPE ASSEMBLY NOTES.

224 WRAP REVEALS AT EXPOSED PANEL ENDS - TYP.

225 ALUMINUM STOREFRONT SYSTEM WITH 1" INSULATED GLASS. REFER TO A0.2, ENVELOPE, ASSEMBLY NOTES FOR GLAZING SPECIFICATION.

226 PRECAST CONCRETE WALLS, PAINTED.

## LEGEND

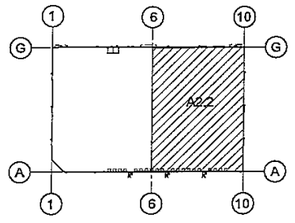
PROPOSED FUTURE OFFICE AREA (N.I.C.)

## WALL LEGEND

CONCRETE WALL

COLD FORMED STUD FRAMING WALL CONSTRUCTION. SEE NOTES ON PLAN FOR FIRE RATING

## KEY PLAN




NOT TO SCALE

State of Illinois Design Firm Registration No. 184.004600
WARE MALCOMB
ARCHITECTURE PLANNING
CIVIL ENGINEERING LANDSCAPE
1215 22nd St. #450 Oak Brook, IL 60523

GRANT A BRANDENBURG 001-020948
EXP: 11 - 30 - 2022

TERMISSNER

MISSNER GROUP - PALATINE
2250 NORTH RAND ROAD

PARTIAL FLOOR PLAN

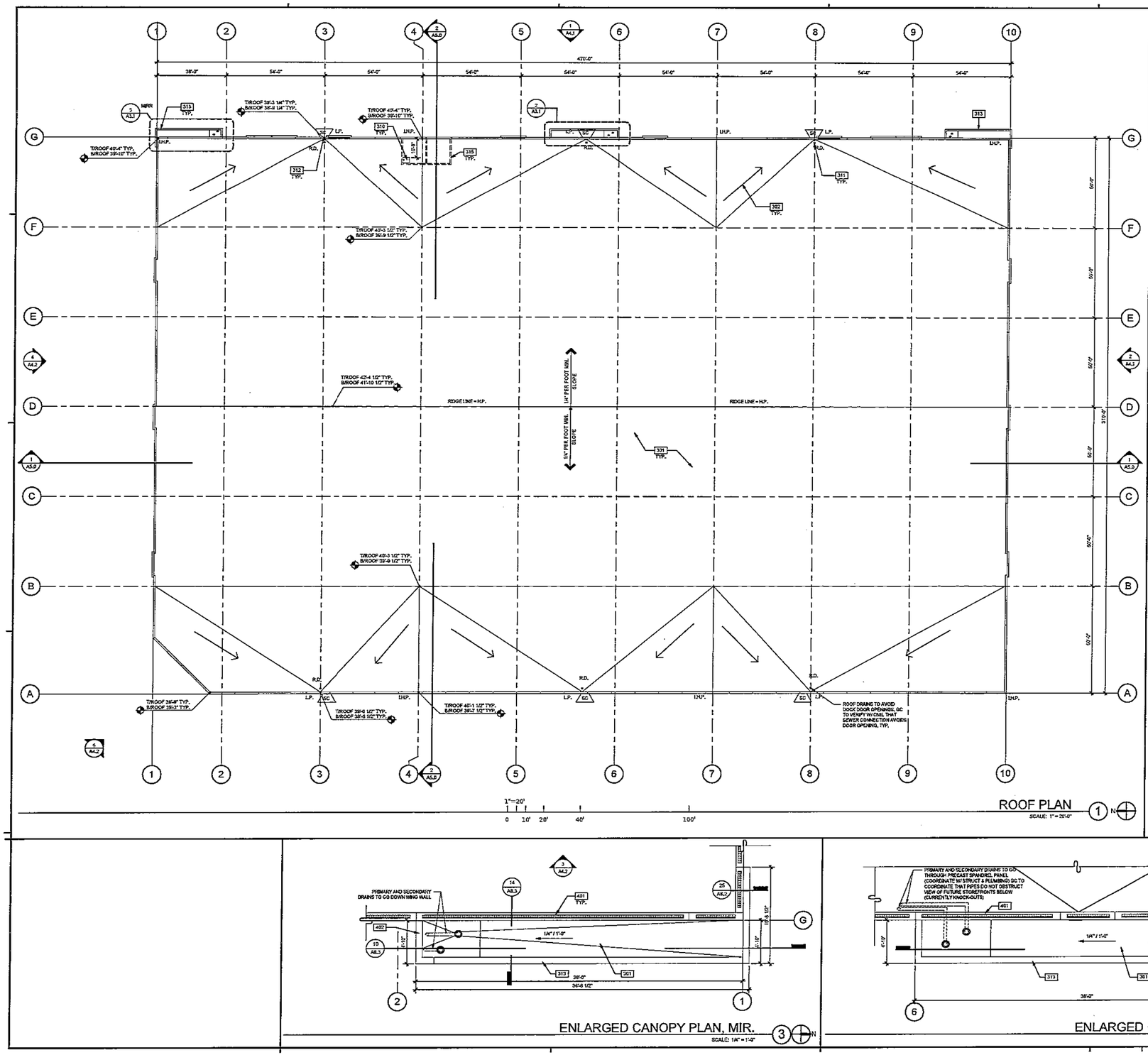
| DATE | REMARKS |
|---|---|
| 3/17/22 | PLANNING SET |

| | |
|---|---|
| PAPM: | M. PULA |
| DRAWN BY: | S.R. |
| JOB NO.: | CH21-0193 |

SHEET
A2.2

Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)

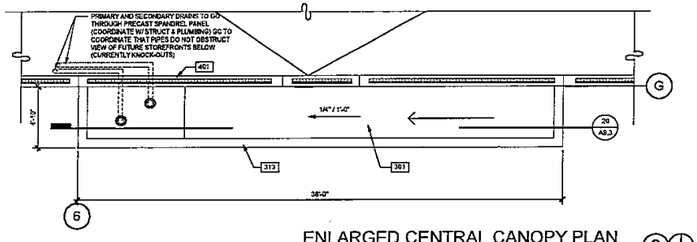
CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED




ROOF PLAN
SCALE: 1" = 20'-0"




ENLARGED CANOPY PLAN, MIR.
SCALE: 1/4" = 1'-0"




ENLARGED CENTRAL CANOPY PLAN
SCALE: 1/4" = 1'-0"

## KEYNOTES:

SEE SHEET A0.2 FOR GENERAL NOTES

| | |
|---|---|
| 301 | ROOF ASSEMBLY, REFER TO A0.2, ENVELOPE ASSEMBLY NOTES. |
| 302 | FLOW LINE TO DRAIN. |
| 310 | 2'-0" x 3'-0" ROOF HATCH. VERIFY ROOF JOIST LOCATIONS WITH STRUCTURAL DRAWINGS. HATCH TO BE MINIMUM OF 10" FROM ROOF EDGE. |
| 311 | PRIMARY DRAIN TIED TO STORM DRAIN WITH OVERFLOW SCUPPERS |
| 312 | PRIMARY AND SECONDARY INTERNAL ROOF DRAIN AND OVERFLOW SCUPPERS TO BE SIZED PER APPLICABLE PLUMBING CODE. |
| 313 | PRE-FINISHED METAL CANOPY. |
| 315 | LINE OF WALL BELOW. |
| 401 | PRECAST CONCRETE WALL, PAINTED. |
| 402 | PRE-FINISHED ALUMINUM COMPOSITE METAL PANEL OVER METAL STUD FRAMING. REFER A0.2, ENVELOPE ASSEMBLY NOTES. COLOR TO MATCH SW 6258 EVENING GRAY. |

## ABBREVIATIONS

| | |
|---|---|
| H.P. | = TOP OF ROOFING - HIGH POINT |
| I.H.P. | = TOP OF ROOFING - INTERMEDIATE HIGH POINT |
| L.P. | = TOP OF ROOFING - LOW POINT |
| R.D. | = ROOF DRAIN |
| SC | = SCUPPER |

"ALL SPOT ELEVATIONS ARE TO TOP OF ROOF MEMBRANE, REFER TO THE STRUCTURAL PLAN FOR B.O.D. (BOTTOM OF DECK) ELEVATIONS.
ASSUMED ROOF THICKNESS = +4.5-5" (1 1/2" METAL DECK + 4" RIGID INSULATION (R-25))

1. REFER TO DETAILS ON SHEET A5.3 FOR TYPICAL ROOF PENETRATION FLASHING DETAILS
2. REFER TO DETAILS ON SHEET A5.3 ROOF, MECHANICAL EQUIPMENT CURB AND CRICKET DETAILS.

PER PALATINE CODE OF ORDINANCES SEC. 6-42.2 Screening:

ROOF-TOP EQUIPMENT SCREENING TO BE PROVIDED FOR VISIBLE ROOF-TOP EQUIPMENT PENDING SUBMISSION OF MEP EQUIPMENT LOCATION

*NEW CONSTRUCTION. ALL MECHANICAL EQUIPMENT AND OTHER SIMILAR DEVICES LOCATED ON ANY ROOF SHALL BE VISUALLY AND ACOUSTICALLY SCREENED ON ALL SIDES. DESIGN AND DETAIL OF SUCH SCREENING ON ALL ELEVATIONS SHALL BE COORDINATED WITH REGARD TO COLOR, TYPES OF MATERIALS, NUMBER OF MATERIALS, ARCHITECTURAL FORM, AND DETAILING TO ACHIEVE HARMONY AND CONTINUITY OF DESIGN WITH THE MAJOR PORTIONS OF THE BUILDING.*

WARE MALCOMB
ARCHITECTURE CIVIL ENGINEERING PLANNING BRANDING INTERIORS BUILDING INFORMATION
1335 22nd St. #410 Oak Brook, IL 60523
State of Illinois Design Firm Registration No. 184-006029

GRANT A. BRANDENBURG 001-026648 REGISTERED ARCHITECT
EXP: 11 - 30 - 2022

THE MISSNER GROUP

MISSNER GROUP - PALATINE
2250 NORTH RAND ROAD
PALATINE, ILLINOIS 60074

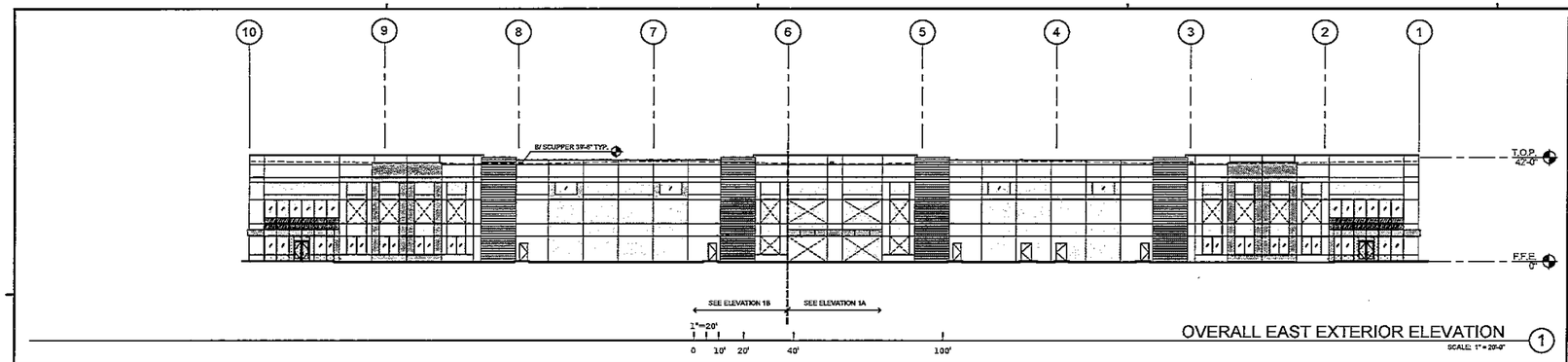
| ROOF PLAN | | |
|---|---|---|
| DATE | REMARKS | |
| 03/25/21 | PROGRESS PACKAGE | |
| 03/25/2022 | PERMIT SET | |

| | |
|---|---|
| PAPM: | M. PULA |
| DRAWN BY: | S.R. |
| JOB NO.: | CH21-0193-00 |

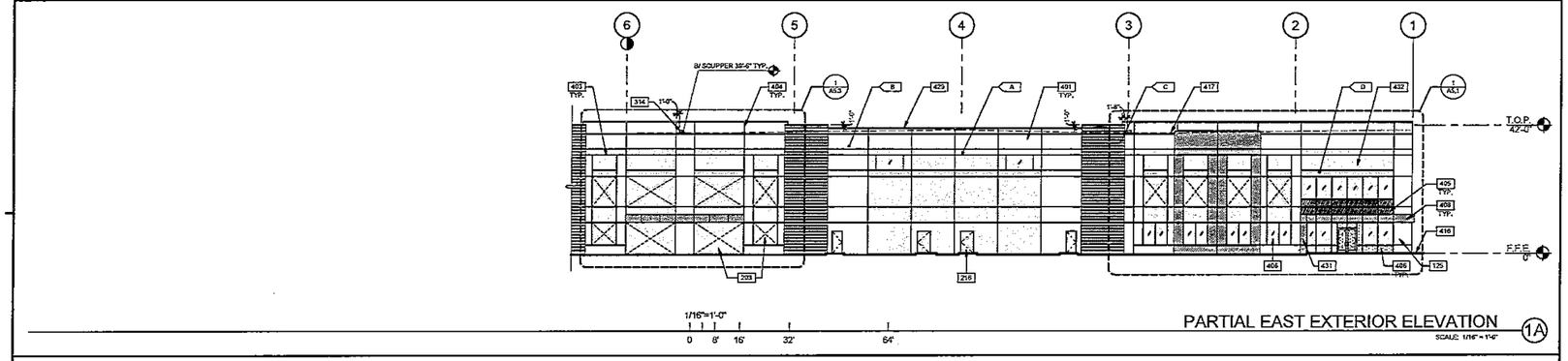
SHEET
A3.1

Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)

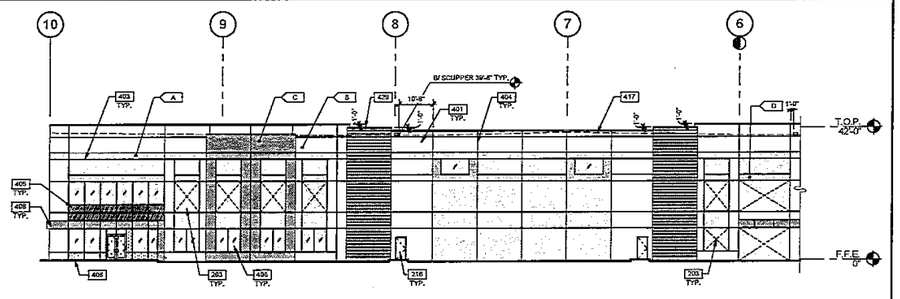
CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED



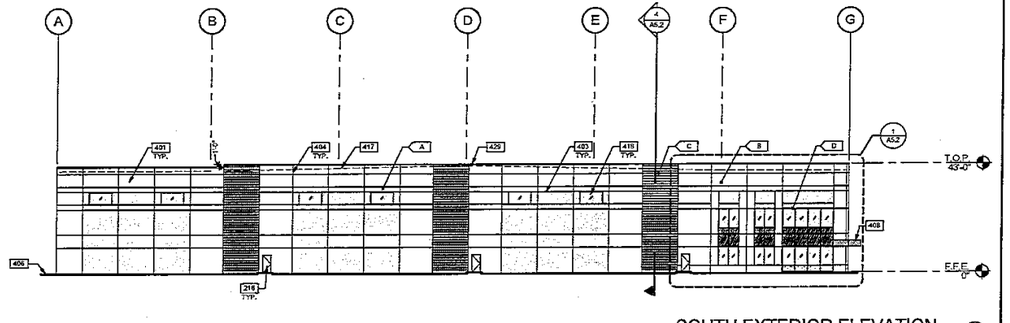

OVERALL EAST EXTERIOR ELEVATION (1) SCALE: 1" = 20'-0"




PARTIAL EAST EXTERIOR ELEVATION (1A) SCALE: 1/16" = 1'-0"




PARTIAL EAST EXTERIOR ELEVATION (1B) SCALE: 1/16" = 1'-0"




SOUTH EXTERIOR ELEVATION (2) SCALE: 1" = 20'-0"

## KEYNOTES:

SEE SHEET A0.2 FOR GENERAL NOTES

| | |
|---|---|
| 125 | PROVIDE KNOX BOX AT FRONT ENTRANCE AND AT FACP ROOM DOOR. LOCATION TO BE VERIFIED WITH AHJ. |
| 203 | KNOCK-OUT PANEL FOR FUTURE WINDOWS OR DOORS. |
| 216 | SERVICE/MAIN DOORS. COLOR: TO MATCH ADJACENT CONCRETE PANEL COLOR. |
| 314 | OVERFLOW SCUPPER TO BE SIZED PER APPLICABLE PLUMBING CODE. REFER TO PLUMBING DRAWINGS. |
| 401 | PRECAST CONCRETE WALL, PAINTED. |
| 403 | 2" REVEAL. |
| 404 | CONCRETE WALL JOINT. |
| 405 | ALUMINUM STOREFRONT SYSTEM - SPANDREL PANEL. REFER TO A0.2, ENVELOPE ASSEMBLY NOTES FOR GLAZING SPECIFICATION. |
| 406 | ALUMINUM WINDOW SYSTEM WITH 1" INSULATED GLASS. REFER TO A0.2, ENVELOPE ASSEMBLY NOTES. |
| 408 | METAL CANOPY, PAINTED REFER TO A0.2, ENVELOPE ASSEMBLY NOTES. |
| 416 | FINISH GRADE VARIES. REFER TO CIVIL. |
| 417 | LINE OF ROOF BEYOND. |
| 418 | CLERESTORY WINDOW 1" INSULATED GLAZING. REFER TO A0.2, ENVELOPE ASSEMBLY NOTES FOR GLAZING SPECIFICATION. |
| 429 | CONTINUOUS PRE-FINISH METAL COPING TO BE PROVIDED AT TOP OF ALL PANELS. COPING COLOR TO MATCH PAINT COLOR AT TOP OF EACH CONCRETE PANEL. |
| 431 | PROVIDE INSULATION IN THE ENTRY PORTAL - PRE-FINISH ACM PANEL RAINSCREEN SYSTEM WALL FRAMING AND AROUND THE CANOPY STORM SEWER DRAIN VERTICAL/ HORIZONTAL LEADER. |
| 432 | CONCRETE SPANDREL PANEL. |

## LEGEND

GLASS:

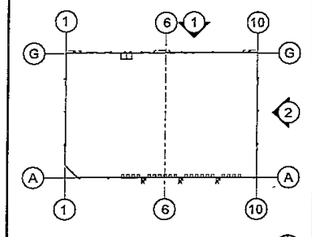
- VISION GLASS
- SPANDREL GLASS
- TEMPERED GLASS

COLORS:

PROVIDE 6'-0" WIDE PAINT COLOR MOCK-UP FULL HEIGHT OF BUILDING FOR OWNER/ARCHITECT REVIEW. GC TO PROVIDE ARCHITECT DRAW DOWNS OF EACH PAINT COLOR.

- A — BASE COLOR: SHERWIN-WILLIAMS "SW 7642 - EVENING SHADOW"
- B — SHERWIN-WILLIAMS "7556 - PHINESTONE"
- C — SHERWIN-WILLIAMS " 6258 - EVENING GRAY"
- D — SHERWIN-WILLIAMS "6794 - FLYWAY"

## KEY PLAN




Rule of Blocks Design Firm Registration No. 184.006499
WARE MALCOMB
ARCHITECTURE CIVIL ENGINEERING PLANNING LANDSCAPE ARCHITECTURE INTERIORS
1515 22nd St #410 Oak Brook, IL 60523 P 630.218.8000

GRANT A. BRANDENBURG 001-020642 STATE OF ILLINOIS EXP: 11 - 30 - 2022

THE MISSNER GROUP

EXTERIOR ELEVATIONS

| DATE | REMARKS |
|---|---|
| 2022.04.06 | PERMIT SET |

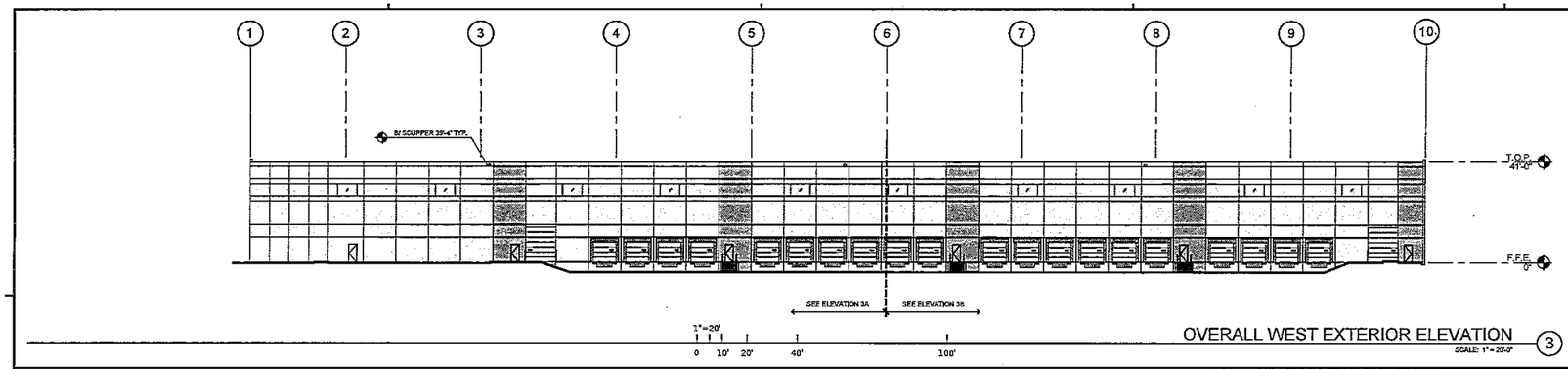
| | |
|---|---|
| PM/PM: | M. PULA |
| DRAWN BY: | S.R. |
| JOB NO.: | CH21-0193.00 |

SHEET A4.1

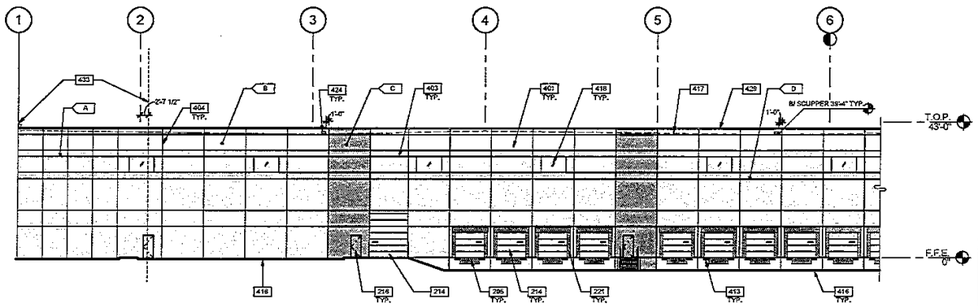
MISSNER GROUP - PALATINE
2250 NORTH RAND ROAD
PALATINE, ILLINOIS 60074

Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)

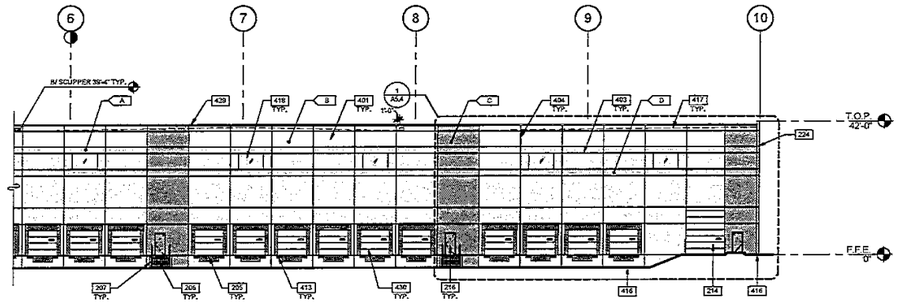
CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED



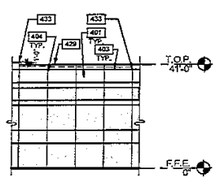

OVERALL WEST EXTERIOR ELEVATION — SCALE: 1" = 20'-0" — 3



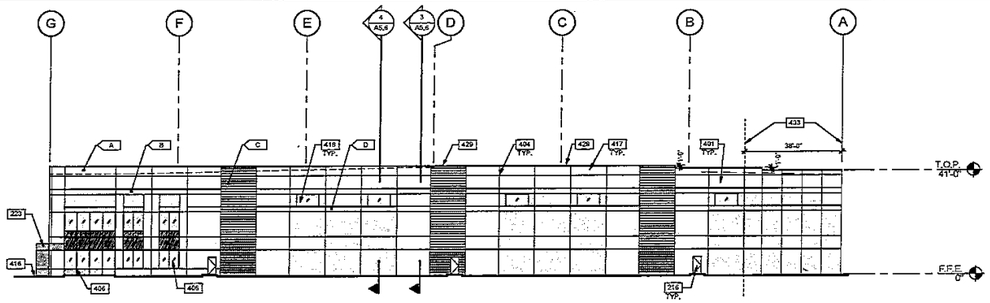

PARTIAL WEST EXTERIOR ELEVATION — SCALE: 1/16" = 1'-0" — 3A




PARTIAL WEST EXTERIOR ELEVATION — SCALE: 1/16" = 1'-0" — 3B




SOUTHWEST EXTERIOR ELEVATION — SCALE: 1" = 20'-0" — 5




NORTH EXTERIOR ELEVATION — SCALE: 1" = 20'-0" — 4

## KEYNOTES:

SEE SHEET A2.2 FOR GENERAL NOTES

- 205 DOCK PIT, DOCK SEAL, LEVELER AND DOCK BUMPERS, TYP. U.N.O. REFER TO A2.2, ENVELOPE ASSEMBLY NOTES.
- 206 EXTERIOR STEEL STAIR, ALL COMPONENTS GALVANIZED.
- 207 STEEL BOLLARD, CONCRETE-FILLED PAINTED SAFETY YELLOW.
- 214 HIGH LIFT OVERHEAD SECTIONAL DOOR, REFER TO A2.2, ENVELOPE ASSEMBLY NOTES.
- 215 SERVICE/MAN DOORS, COLOR: TO MATCH ADJACENT CONCRETE PANEL COLOR.
- 221 DOCK SEAL
- 223 ENTRY PORTAL - PRE-FINISH ACM PANEL RAINSCREEN SYSTEM. REFER TO A2.2, ENVELOPE ASSEMBLY NOTES.
- 224 WRAP REVEALS AT EXPOSED PANEL ENDS - TYP.
- 401 PRECAST CONCRETE WALL, PAINTED.
- 403 2" REVEAL
- 404 CONCRETE WALL JOINT.
- 406 ALUMINUM WINDOW SYSTEM WITH 1" INSULATED GLASS REFER TO A2.2, ENVELOPE ASSEMBLY NOTES.
- 413 DOCK BUMPER.
- 416 FINISH GRADE VARIES, REFER TO CIVIL.
- 417 LINE OF ROOF BEYOND.
- 418 CLERESTORY WINDOW 1" INSULATED GLAZING. REFER TO A2.2, ENVELOPE ASSEMBLY NOTES FOR GLAZING SPECIFICATION.
- 424 OVERFLOW SCUPPER OPENING TO BE SIZED PER APPLICABLE PLUMBING CODE.REFER TO PLUMBING DRAWINGS.
- 429 CONTINUOUS PRE-FINISH METAL COPING TO BE PROVIDED AT TOP OF ALL PANELS. COPING COLOR TO MATCH PAINT COLOR AT TOP OF EACH CONCRETE PANEL.
- 430 OVERHEAD DOOR
- 433 EXTERIOR WALLS AND PANEL JOINTS WITHIN THIS AREA TO BE 3HR RATED TO COMPLY WITH IBC 2015 (507.4 & 507.2.1)

## LEGEND

GLASS:

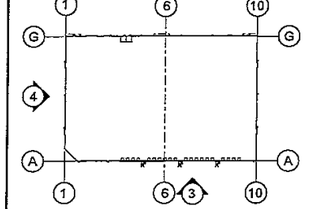
- VISION GLASS
- SPANDREL GLASS
- TEMPERED GLASS

COLORS:

PROVIDE 6'-0" WIDE PAINT COLOR MOCKUP FULL HEIGHT OF BUILDING FOR OWNER/ARCHITECT REVIEW, GC TO PROVIDE ARCHITECT DRAW DOWNS OF EACH PAINT COLOR.

- A — BASE COLOR: SHERWIN-WILLIAMS "SW 7662 - EVENING SHADOW"
- B — SHERWIN-WILLIAMS "7658 - PINNESTONE"
- C — SHERWIN-WILLIAMS " 6258 - EVENING GRAY"
- D — SHERWIN-WILLIAMS "6794 - FLYWAY"

## KEY PLAN




WARE MALCOMB
1318 22nd St. #413
Oak Brook, IL 60523
ARCHITECTURE CIVIL ENGINEERING
PLANNING BRANDING
INTERIORS ELECTRONIC SECURITY
State of Rhode Design Firm Registration No. 184-000699

DANIEL A. SMANDRUSZKO
LICENSED ARCHITECT
001-020648
STATE OF ILLINOIS
EXP: 11 - 30 - 2022

THE MISSNER GROUP

MISSNER GROUP -
PALATINE
2250 NORTH RAND ROAD
PALATINE, ILLINOIS 60074

EXTERIOR ELEVATIONS

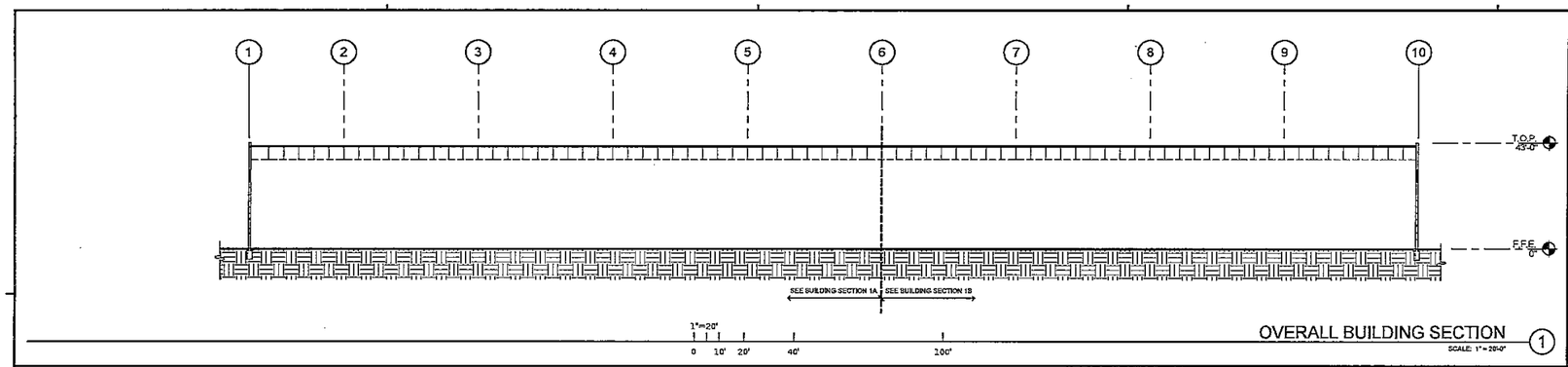
| REMARKS | DATE |
|---|---|
| PERMIT SET | 2/22/2022 |

| | |
|---|---|
| PAPM: | M. PUIA |
| DRAWN BY: | S.R. |
| JOB NO.: | CH21-21143-00 |

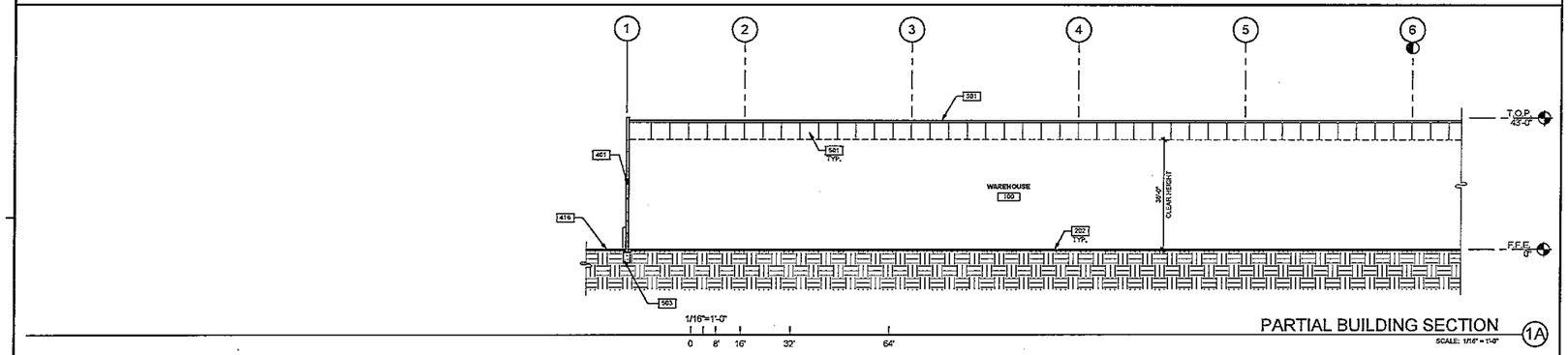
SHEET
A4.2

Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)

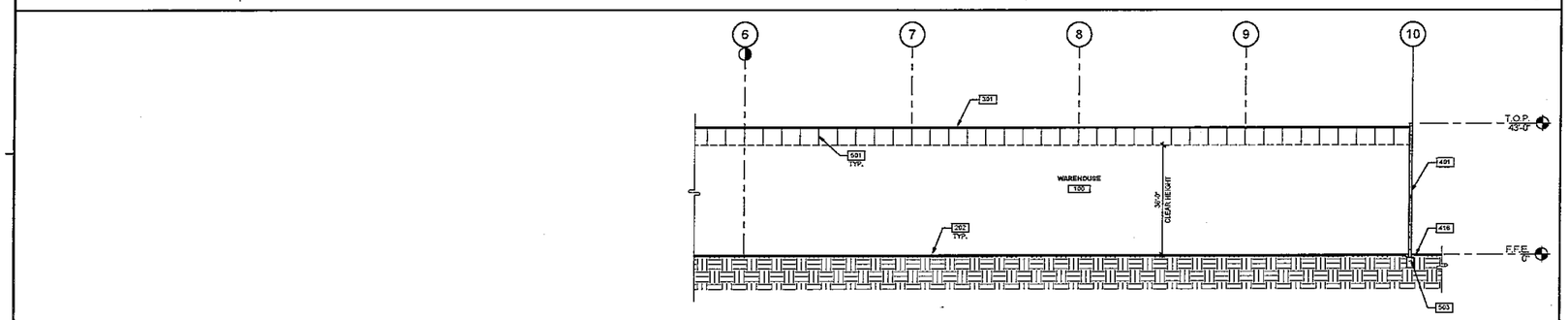
CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED



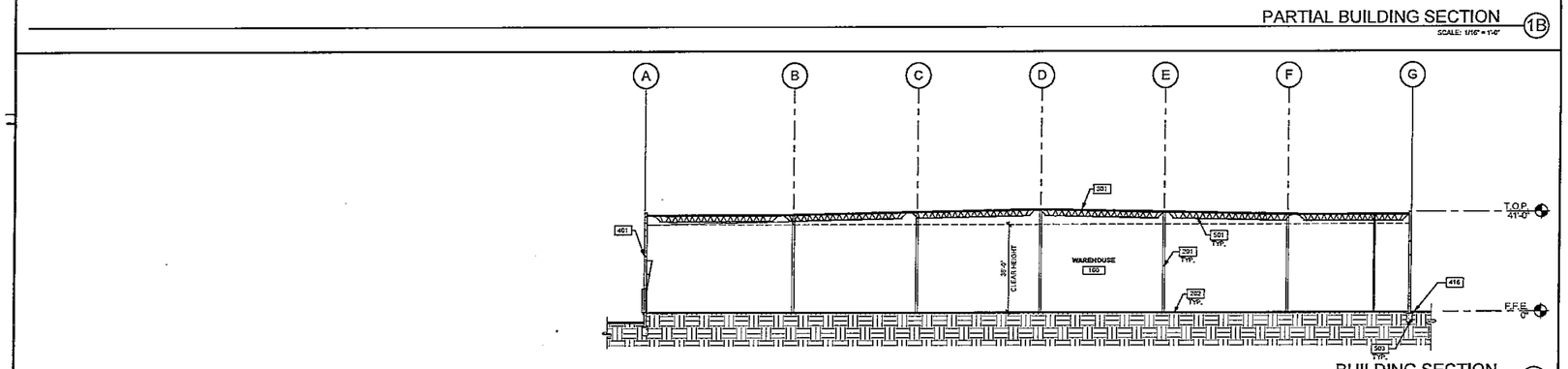

OVERALL BUILDING SECTION 1
SCALE: 1" = 20'-0"




PARTIAL BUILDING SECTION 1A
SCALE: 1/16" = 1'-0"




PARTIAL BUILDING SECTION 1B
SCALE: 1/16" = 1'-0"




BUILDING SECTION 2
SCALE: 1" = 20'-0"

KEYNOTES:

SEE SHEET A0.2 FOR GENERAL NOTES

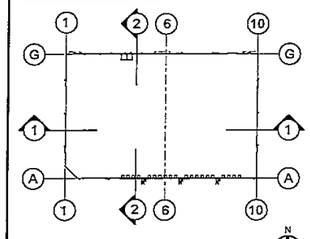
201 STRUCTURAL STEEL COLUMN, REFER TO STUCTURAL.
202 CONCRETE SLAB, PROVIDE VAPOR RETARDER AT OFFICE AREA PER SOILS REPORT, PROVIDE SEALER FOR CONCRETE FLOOR AREA IN WAREHOUSE. REFER TO STRUCTURAL DRAWINGS.
301 ROOF ASSEMBLY, REFER TO A0.2, ENVELOPE ASSEMBLY NOTES.
401 PRECAST CONCRETE WALL, PAINTED.
416 FINISH GRADE VARIES, REFER TO CIVIL.
501 STRUCTURAL STEEL JOIST, REFER TO STRUCTURAL.
503 CONCRETE FOOTING, REFER TO STRUCTURAL.

WALL LEGEND

CONCRETE WALL

COLD FORMED STUD FRAMING WALL CONSTRUCTION, SEE NOTES ON PLAN FOR FIRE RATING

KEY PLAN




N
NOT TO SCALE

Board of Rhode Design Firm Registration No. 5854
WARE MALCOMB
ARCHITECTURE CIVIL ENGINEERING PLANNING
INTERIORS LANDSCAPE ARCHITECTURE MEASUREMENT
1515 22nd St. #210 Oak Brook, IL 60523 P 630.218.8000
GRANT A. BRUCKNER 001-020648
EXP: 11 - 30 - 2022
THE MISSNER GROUP

MISSNER GROUP - PALATINE
2250 NORTH RAND ROAD
PALATINE, ILLINOIS 60074

BUILDING SECTIONS

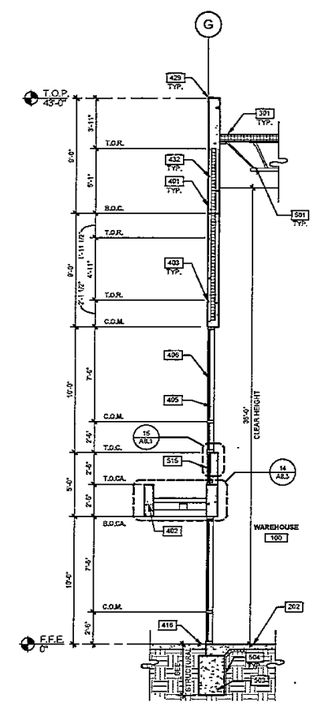
| DATE | REMARKS |
|---|---|
| 2022.03.04 | PERMIT SET |
| 2022.04.08 | |

| | |
|---|---|
| PM/PM: | M. PULA |
| DRAWN BY: | S.R. |
| JOB NO.: | CH21-2183-00 |

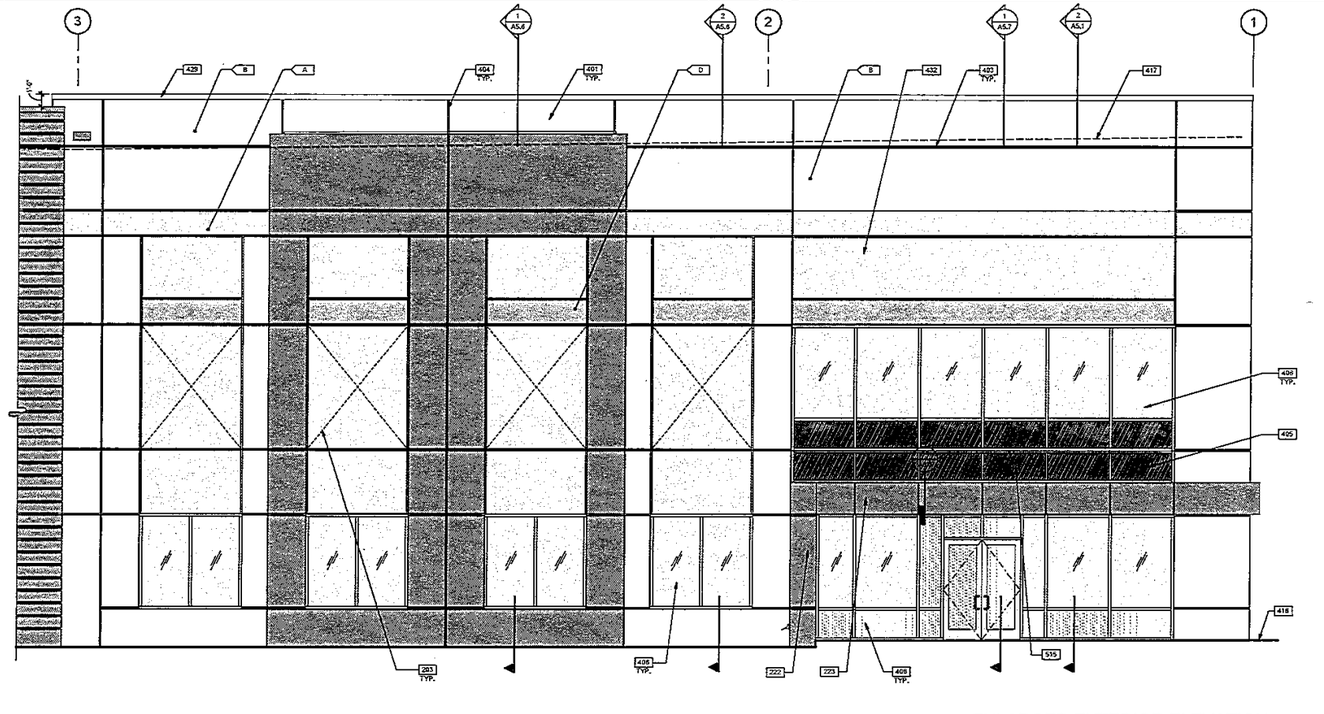
SHEET
A5.0

Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)

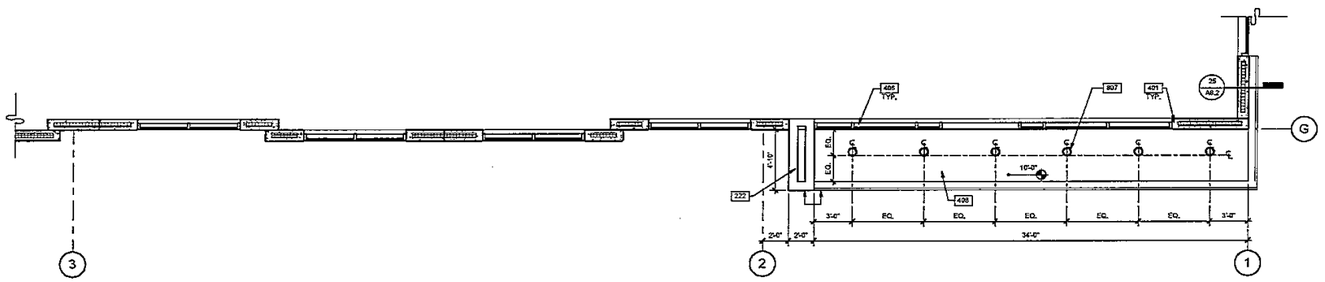
CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED



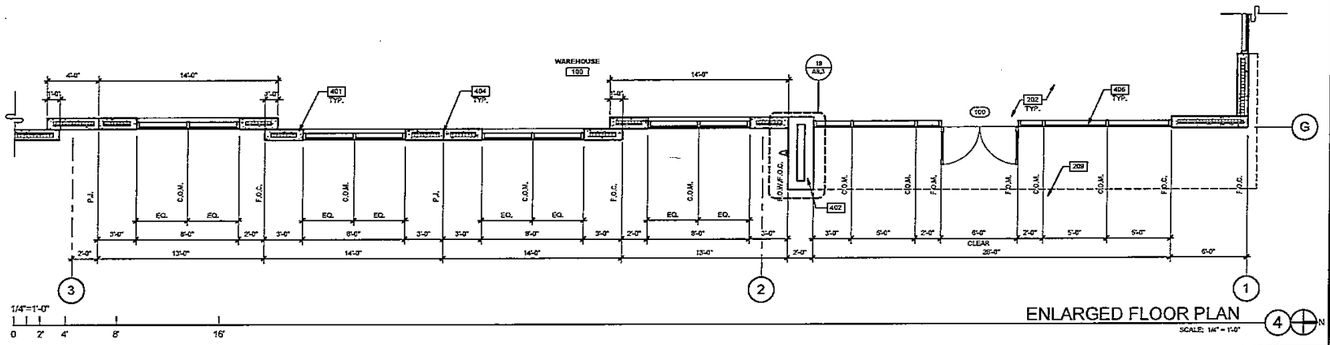

WALL SECTION 2
SCALE: 1/4" = 1'-0"




ENLARGED EXTERIOR ELEVATION 1
SCALE: 1/4" = 1'-0"




ENLARGED ENTRY SOFFIT PLAN 3
SCALE: 1/4" = 1'-0"




ENLARGED FLOOR PLAN 4
SCALE: 1/4" = 1'-0"

1/4"=1'-0"
0 2' 4' 8' 16'

## KEYNOTES:

SEE SHEET A0.2 FOR GENERAL NOTES

202 CONCRETE SLAB. PROVIDE VAPOR RETARDER AT OFFICE AREA PER SOILS REPORT. PROVIDE SEALER FOR CONCRETE FLOOR AREA IN WAREHOUSE. REFER TO STRUCTURAL DRAWINGS.
203 KNOCK-OUT PANEL FOR FUTURE WINDOWS OR DOORS.
209 OUTLINE OF CANOPY ABOVE.
222 PROVIDE KNOX BOX AT FRONT ENTRANCE AND AT THE FACP ROOM DOOR. LOCATION TO BE VERIFIED WITH AHJ.
223 ENTRY PORTAL - PRE-FINISH ACM PANEL RAINSCREEN SYSTEM. REFER TO A0.2, ENVELOPE ASSEMBLY NOTES.
391 ROOF ASSEMBLY. REFER TO A0.2, ENVELOPE ASSEMBLY NOTES.
401 PRECAST CONCRETE WALL, PAINTED.
402 PRE-FINISHED ALUMINUM COMPOSITE METAL PANEL OVER METAL STUD FRAMING REFER A0.2, ENVELOPE ASSEMBLY NOTES. COLOR TO MATCH SW 6258 EVENING GRAY.
403 2" REVEAL.
404 CONCRETE WALL JOINT.
405 ALUMINUM STOREFRONT SYSTEM - SPANDREL PANEL. REFER TO A0.2, ENVELOPE ASSEMBLY NOTES FOR GLAZING SPECIFICATION.
406 ALUMINUM WINDOW SYSTEM WITH 1" INSULATED GLASS REFER TO A0.2, ENVELOPE ASSEMBLY NOTES.
408 METAL CANOPY, PAINTED REFER TO A0.2, ENVELOPE ASSEMBLY NOTES.
418 FINISH GRADE VARIES, REFER TO CIVIL.
417 LINE OF ROOF BEYOND.
429 CONTINUOUS PRE-FINISH METAL COPING TO BE PROVIDED AT TOP OF ALL PANELS. COPING COLOR TO MATCH PAINT COLOR AT TOP OF EACH CONCRETE PANEL.
432 CONCRETE SPANDREL PANEL.
501 STRUCTURAL STEEL, JOIST, REFER TO STRUCTURAL.
503 CONCRETE FOOTING, REFER TO STRUCTURAL.
594 PROVIDE RIGID INSULATION AT FOOTINGS AND WALL PANELS BELOW SLAB.
515 2 1/2" WIDE STOREFRONT SYSTEM INSTALLED IN FRONT OF THE CONCRETE SPANDREL PANEL.
807 CAN LIGHTS

## WALL LEGEND

CONCRETE WALL

COLD FORMED STUD FRAMING WALL CONSTRUCTION, SEE NOTES ON PLAN FOR FIRE RATING

## LEGEND

GLASS:

VISION GLASS

SPANDREL GLASS

TEMPERED GLASS

CEILING:

RECESSED 6" OR 8" LED DOWNLIGHT.

COLORS:

PROVIDE 6'-0" WIDE PAINT COLOR MOCK-UP FULL HEIGHT OF BUILDING FOR OWNER/ARCHITECT REVIEW, GC TO PROVIDE ARCHITECT DRAW DOWNS OF EACH PAINT COLOR.

A BASE COLOR: SHERWIN-WILLIAMS "SW 7062 - EVENING SHADOW"
B SHERWIN-WILLIAMS "7654 - PINKSTONE"
C SHERWIN-WILLIAMS "6258 - EVENING GRAY"
D SHERWIN-WILLIAMS "6794 - FLYWAY"

WARE MALCOMB
Bids of Blocks Design Firm Registration No. 184-004099
ARCHITECTURE CIVIL ENGINEERING
PLANNING BRANDING
INTERIORS BUILDING MEASUREMENT
1316 22nd St. #410
Oak Brook, IL 60523
P 630.574.8300

GRANT A. BRANDENBURG
041-029643
EXP: 11 - 30 - 2022

THE MISSNER GROUP

MISSNER GROUP - PALATINE
2250 NORTH RAND ROAD
PALATINE, ILLINOIS 60074

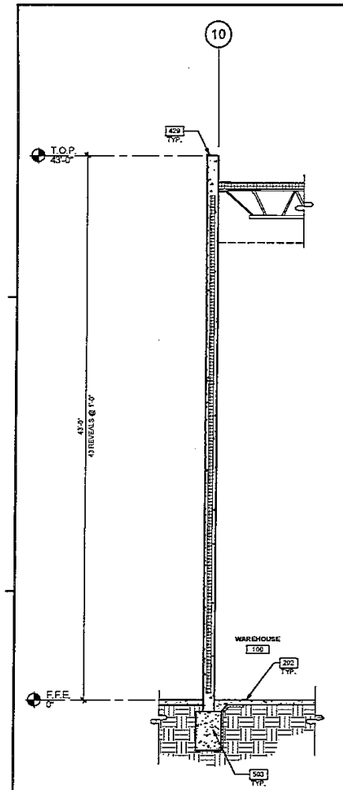
ENLARGED ELEVATION, PLAN AND WALL SECTIONS

| DATE | PROGRESS / ADDENDA |
|---|---|
| 2022.05.04 | PERMIT SET |
| 2022.04.08 | |

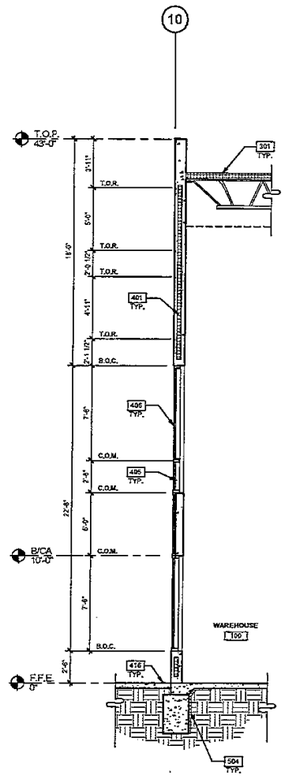
| | |
|---|---|
| PAPM: | N. PULA |
| DRAWN BY: | S.R. |
| JOB NO.: | CH21-0193-00 |

SHEET
A5.1

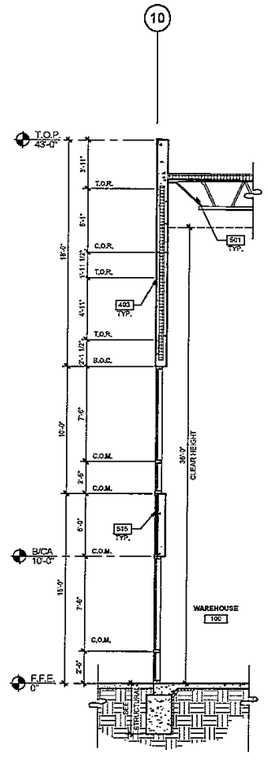
Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)



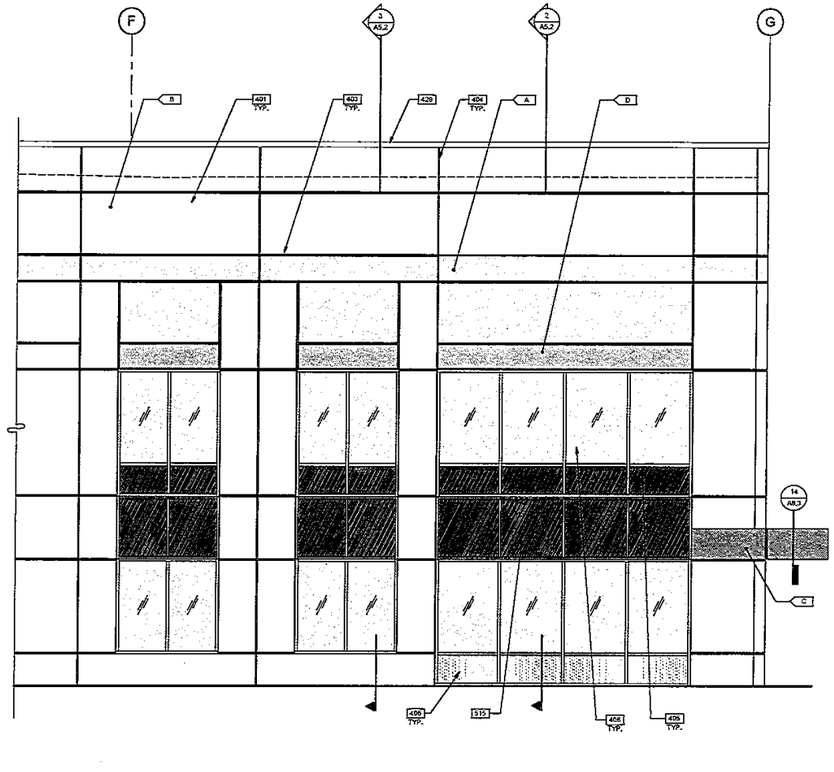

WALL SECTION 4
SCALE: 1/4" = 1'-0"




WALL SECTION 3
SCALE: 1/4" = 1'-0"




WALL SECTION 2
SCALE: 1/4" = 1'-0"




ENLARGED EXTERIOR ELEVATION 1
SCALE: 1/4" = 1'-0"

## KEYNOTES:

SEE SHEET A0.7 FOR GENERAL NOTES

202 CONCRETE SLAB. PROVIDE VAPOR RETARDER AT OFFICE AREA PER SOILS REPORT. PROVIDE SEALER FOR CONCRETE FLOOR AREA IN WAREHOUSE. REFER TO STRUCTURAL DRAWINGS.
301 ROOF ASSEMBLY. REFER TO A0.2, ENVELOPE ASSEMBLY NOTES.
401 PRECAST CONCRETE WALL, PAINTED.
403 2" REVEAL.
404 CONCRETE WALL JOINT.
405 ALUMINUM STOREFRONT SYSTEM - SPANDREL PANEL. REFER TO A0.2, ENVELOPE ASSEMBLY NOTES FOR GLAZING SPECIFICATION.
406 ALUMINUM WINDOW SYSTEM WITH 1" INSULATED GLASS REFER TO A0.2, ENVELOPE ASSEMBLY NOTES.
416 FINISH GRADE VARIES, REFER TO CIVIL.
429 CONTINUOUS PRE-FINISH METAL COPING TO BE PROVIDED AT TOP OF ALL PANELS. COPING COLOR TO MATCH PAINT COLOR AT TOP OF EACH CONCRETE PANEL.
501 STRUCTURAL STEEL JOIST, REFER TO STRUCTURAL.
503 CONCRETE FOOTING, REFER TO STRUCTURAL.
504 PROVIDE RIGID INSULATION AT FOOTINGS AND WALL PANELS BELOW SLAB.
515 2 1/2" WIDE STOREFRONT SYSTEM INSTALLED IN FRONT OF THE CONCRETE SPANDREL PANEL.

## WALL LEGEND

CONCRETE WALL

COLD FORMED STUD FRAMING WALL CONSTRUCTION, SEE NOTES ON PLAN FOR FIRE RATING

## LEGEND

GLASS:

VISION GLASS

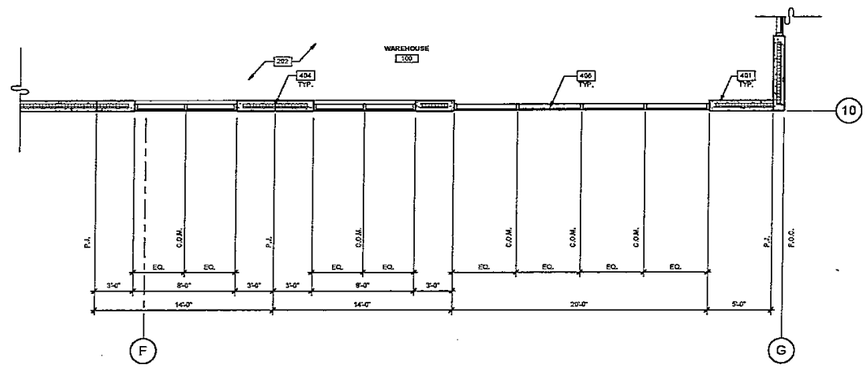
SPANDREL GLASS

TEMPERED GLASS

COLORS:

PROVIDE 6'-0" WIDE PAINT COLOR MOCKUP FULL HEIGHT OF BUILDING FOR OWNER/ARCHITECT REVIEW, GC TO PROVIDE ARCHITECT DRAW DOWNS OF EACH PAINT COLOR.

A BASE COLOR: SHERWIN-WILLIAMS "SW 7662 - EVENING SHADOW"
B SHERWIN-WILLIAMS "7654 - PHINESTONE"
C SHERWIN-WILLIAMS " 6254 - EVENING GRAY"
D SHERWIN-WILLIAMS "6784 - FLYWAY"




1/4"=1'-0"
0 2' 4' 8' 16'

ENLARGED FLOOR PLAN 5
SCALE: 1/4" = 1'-0"

WARE MALCOMB
ARCHITECTURE CIVIL ENGINEERING PLANNING INTERIORS LANDSCAPE ARCHITECTURE
1316 22nd St. #410 Oak Brook, IL 60523 p 630.734.6000

Rules of Brick Design Form Registration No. 184-000499

GRANT A. BRANDENBURG 001-026648 EXP: 11 - 30 - 2022

THE MISSNER GROUP

MISSNER GROUP -
PALATINE
2250 NORTH RAND ROAD
PALATINE, ILLINOIS 60074

ENLARGED ELEVATION, PLAN AND WALL SECTIONS

| DATE | REMARKS |
|---|---|
| 2021-04-06 | PERMIT SET |

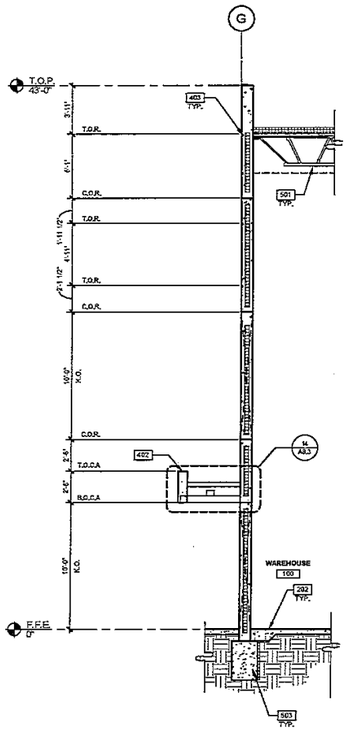
PAPM: M. PULA
DRAWN BY: S.R.
JOB NO.: CH121-0193-00

SHEET
A5.2

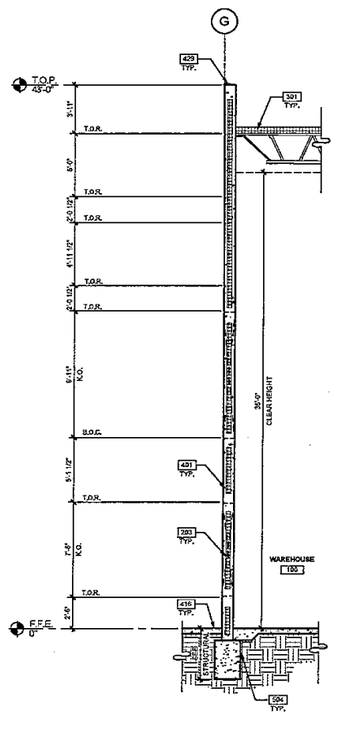
4/16/21

Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)

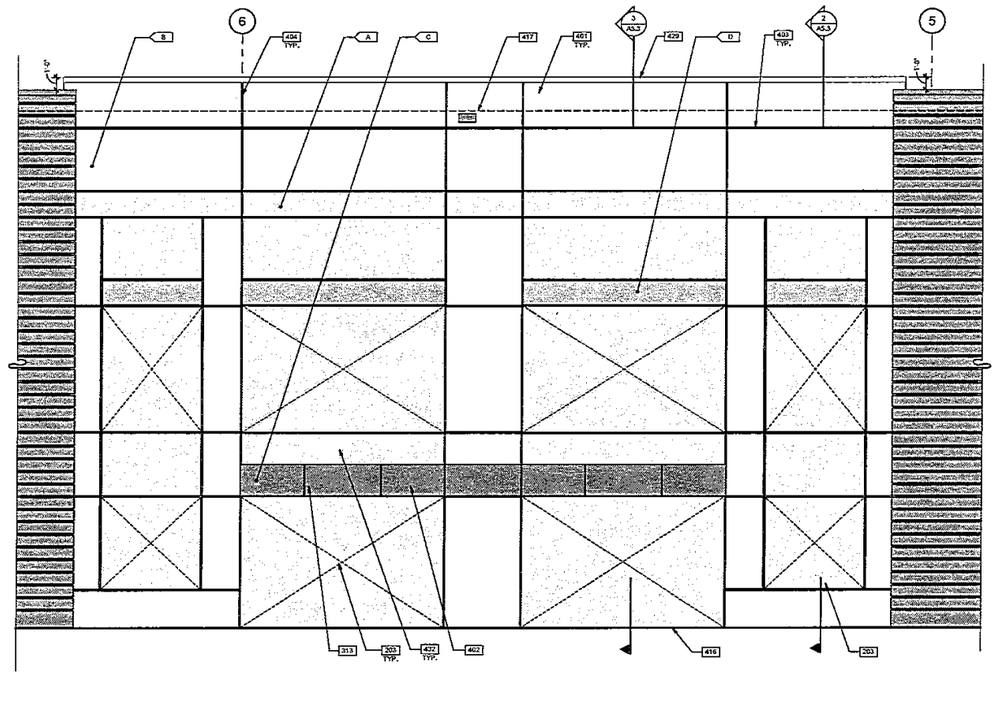
CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED PI



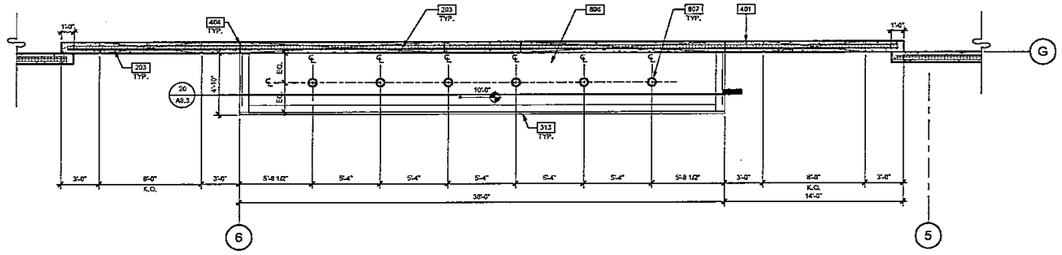

WALL SECTION 3
SCALE: 1/4" = 1'-0"



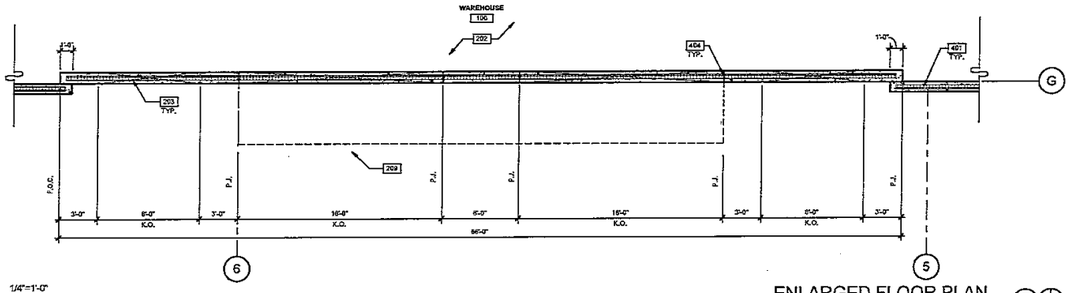

WALL SECTION 2
SCALE: 1/4" = 1'-0"




ENLARGED EXTERIOR ELEVATION 1
SCALE: 1/4" = 1'-0"




ENLARGED ENTRY SOFFIT PLAN 4
SCALE: 1/4" = 1'-0"




ENLARGED FLOOR PLAN 5
SCALE: 1/4" = 1'-0"

## KEYNOTES:

SEE SHEET A0.2 FOR GENERAL NOTES

| | |
|---|---|
| 202 | CONCRETE SLAB. PROVIDE VAPOR RETARDER AT OFFICE AREA PER SOILS REPORT. PROVIDE SEALER FOR CONCRETE FLOOR AREA IN WAREHOUSE. REFER TO STRUCTURAL DRAWINGS. |
| 203 | KNOCK-OUT PANEL FOR FUTURE WINDOWS OR DOORS. |
| 209 | OUTLINE OF CANOPY ABOVE. |
| 301 | ROOF ASSEMBLY. REFER TO A3.2, ENVELOPE ASSEMBLY NOTES. |
| 313 | PRE-FINISHED METAL CANOPY. |
| 401 | PRECAST CONCRETE WALL, PAINTED. |
| 402 | PRE-FINISHED ALUMINUM COMPOSITE METAL PANEL OVER METAL STUD FRAMING REFER A3.2, ENVELOPE ASSEMBLY NOTES, COLOR TO MATCH SW 6256 EVENING GRAY. |
| 403 | 2" REVEAL. |
| 404 | CONCRETE WALL JOINT. |
| 416 | FINISH GRADE VARIES, REFER TO CIVIL. |
| 417 | LINE OF ROOF BEYOND. |
| 429 | CONTINUOUS PRE-FINISH METAL COPING TO BE PROVIDED AT TOP OF ALL PANELS, COPING COLOR TO MATCH PAINT COLOR AT TOP OF EACH CONCRETE PANEL. |
| 432 | CONCRETE SPANDREL PANEL. |
| 501 | STRUCTURAL STEEL JOIST, REFER TO STRUCTURAL. |
| 503 | CONCRETE FOOTING, REFER TO STRUCTURAL. |
| 504 | PROVIDE RIGID INSULATION AT FOOTINGS AND WALL PANELS BELOW SLAB. |
| 806 | CEILING |
| 807 | FIN LOUVER |

## WALL LEGEND

- CONCRETE WALL
- COLD FORMED STUD FRAMING WALL CONSTRUCTION, SEE NOTES ON PLAN FOR FIRE RATING

## LEGEND

COLORS:

PROVIDE 6'-0" WIDE PAINT COLOR MOCK-UP FULL HEIGHT OF BUILDING FOR OWNER/ARCHITECT REVIEW. GC TO PROVIDE ARCHITECT DRAW DOWNS OF EACH PAINT COLOR.

| | | |
|---|---|---|
| A | | BASE COLOR: SHERWIN-WILLIAMS "SW 7682 - EVENING SHADOW" |
| B | | SHERWIN-WILLIAMS "7658 - PHINESTONE" |
| C | | SHERWIN-WILLIAMS " 6256 - EVENING GRAY" |
| D | | SHERWIN-WILLIAMS "6794 - FLYWAY" |

## LEGEND

GLASS:

- VISION GLASS
- SPANDREL GLASS
- TEMPERED GLASS

CEILING:

- RECESSED 6" OR 8" LED DOWNLIGHT.

1/4"=1'-0"
0 2' 4' 8' 16'

Made of Bricks Design Firm Registration No. 184-004409
WARE MALCOMB
ARCHITECTURE CIVIL ENGINEERING
PLANNING BRANDING
INTERIORS BUILDING MEASUREMENT
1515 Stone Rd. #410
Oak Brook, IL 60523
P 630.218.0053
BRANT A BRANDENBURG
001-020642
EXP: 11 - 30 - 2022

THE MISSNER GROUP

MISSNER GROUP - PALATINE
2250 NORTH RAND ROAD
PALATINE, ILLINOIS 60074

ENLARGED ELEVATION, PLAN AND WALL SECTIONS

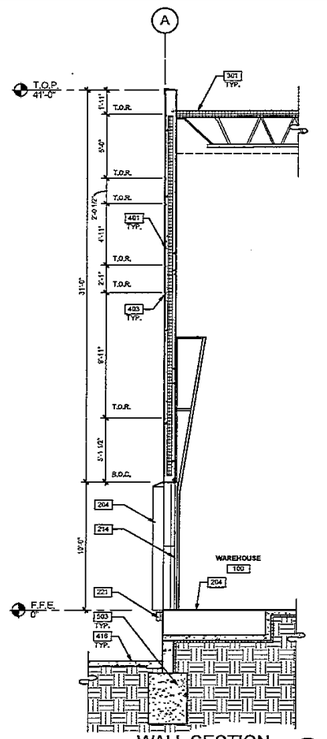
| DATE | REMARKS |
|---|---|
| 2021.12.14 | PROGRESS SET/SUBMISSION |
| 2022.04.04 | PERMIT SET |

| | |
|---|---|
| PAPM: | M. PULA |
| DRAWN BY: | S.R. |
| JOB NO.: | CH21-0183-00 |

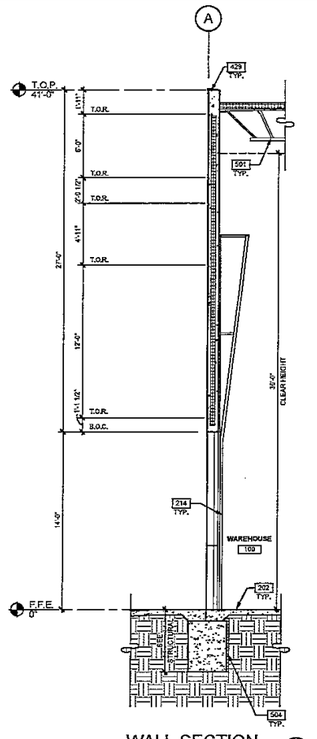
SHEET
A5.3

Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)

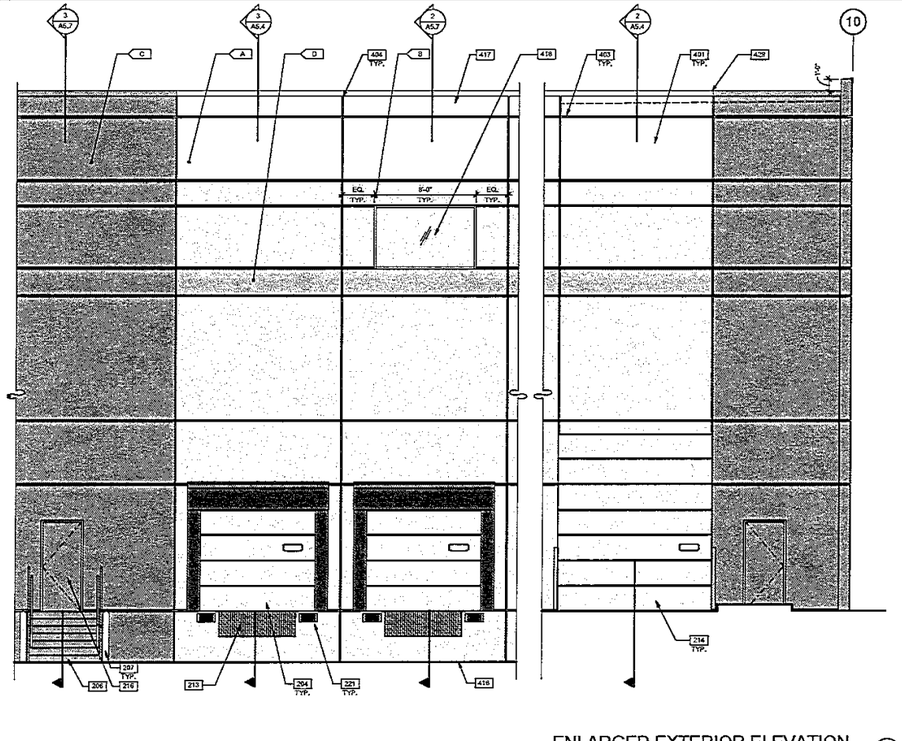
CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED P




WALL SECTION 3
SCALE: 1/4" = 1'-0"




WALL SECTION 2
SCALE: 1/4" = 1'-0"




ENLARGED EXTERIOR ELEVATION 1
SCALE: 1/4" = 1'-0"

## KEYNOTES:

SEE SHEET A0.2 FOR GENERAL NOTES:

| | |
|---|---|
| 202 | CONCRETE SLAB. PROVIDE VAPOR RETARDER AT OFFICE AREA PER SOILS REPORT. PROVIDE SEALER FOR CONCRETE FLOOR AREA IN WAREHOUSE. REFER TO STRUCTURAL DRAWINGS. |
| 204 | 6'X 8' MECHANICAL DOCK LEVELER, 35,000 LBS DYNAMIC CAPACITY, MANUALLY OPERATED (SPRING ASSISTED), REFER TO A0.2 ENVELOPE ASSEMBLY NOTES. |
| 205 | DOCK PIT, DOCK SEAL, LEVELER AND DOCK BUMPERS, TYP, U.N.O. REFER TO A0.2, ENVELOPE ASSEMBLY NOTES. |
| 206 | EXTERIOR STEEL STAIR, ALL COMPONENTS GALVANIZED. |
| 207 | STEEL BOLLARD, CONCRETE-FILLED PAINTED SAFETY YELLOW. |
| 213 | 42"H, CONTINUOUS METAL GUARDRAIL, PAINTED. |
| 214 | HIGH LIFT OVERHEAD SECTIONAL DOOR, REFER TO A0.2, ENVELOPE ASSEMBLY NOTES. |
| 216 | SERVICE/MAN DOORS, COLOR: TO MATCH ADJACENT CONCRETE PANEL COLOR. |
| 221 | DOCK SEAL |
| 301 | ROOF ASSEMBLY. REFER TO A0.2, ENVELOPE ASSEMBLY NOTES. |
| 401 | PRECAST CONCRETE WALL, PAINTED. |
| 403 | 2" REVEAL. |
| 404 | CONCRETE WALL JOINT. |
| 416 | FINISH GRADE VARIES, REFER TO CIVIL. |
| 417 | LINE OF ROOF BEYOND. |
| 418 | CLERESTORY WINDOW 1" INSULATED GLAZING. REFER TO A0.2, ENVELOPE ASSEMBLY NOTES FOR GLAZING SPECIFICATION. |
| 429 | CONTINUOUS PRE-FINISH METAL COPING TO BE PROVIDED AT TOP OF ALL PANELS. COPING COLOR TO MATCH PAINT COLOR AT TOP OF EACH CONCRETE PANEL. |
| 501 | STRUCTURAL STEEL JOIST, REFER TO STRUCTURAL. |
| 503 | CONCRETE FOOTING, REFER TO STRUCTURAL. |
| 504 | PROVIDE RIGID INSULATION AT FOOTINGS AND WALL PANELS BELOW SLAB. |

## WALL LEGEND

CONCRETE WALL

COLD FORMED STUD FRAMING WALL CONSTRUCTION. SEE NOTES ON PLAN FOR FIRE RATING

## LEGEND

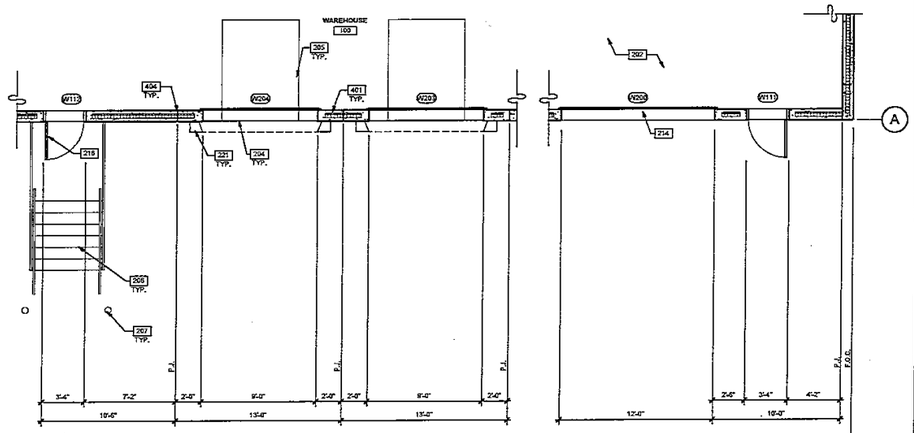
GLASS:

VISION GLASS

COLORS:

PROVIDE 8'-0" WIDE PAINT COLOR MOCK-UP FULL HEIGHT OF BUILDING FOR OWNER/ARCHITECT REVIEW. GC TO PROVIDE ARCHITECT DRAW DOWNS OF EACH PAINT COLOR.

- A — BASE COLOR: SHERWIN-WILLIAMS "SW 7662 - EVENING SHADOW"
- B — SHERWIN-WILLIAMS "7656 - PHINESTONE"
- C — SHERWIN-WILLIAMS " 6258 - EVENING GRAY"
- D — SHERWIN-WILLIAMS "6784 - FLYWAY"




1/4"=1'-0"
0 2' 4' 8' 16'

ENLARGED FLOOR PLAN 4
SCALE: 1/4" = 1'-0"

Made of Words Design Firm Registration No. 184.005699
WARE MALCOMB
ARCHITECTURE CIVIL ENGINEERING
PLANNING LANDSCAPE
INTERIORS BUILDING RESTORATION
3185 Grand Ave
Suite 200
Gurnee, IL 60031
P 630.2160003

GRANT A. BRANDENBURG
001-020842
REGISTERED ARCHITECT
STATE OF ILLINOIS
EXP: 11 - 30 - 2022

THE MISSNER GROUP

MISSNER GROUP -
PALATINE
2250 NORTH RAND ROAD
PALATINE, ILLINOIS 60074

ENLARGED ELEVATION, PLAN AND WALL SECTIONS

| DATE | REMARKS |
|---|---|
| 2022.02.04 | PROGRESS PACKAGE |
| 2022.04.18 | PERMIT SET |

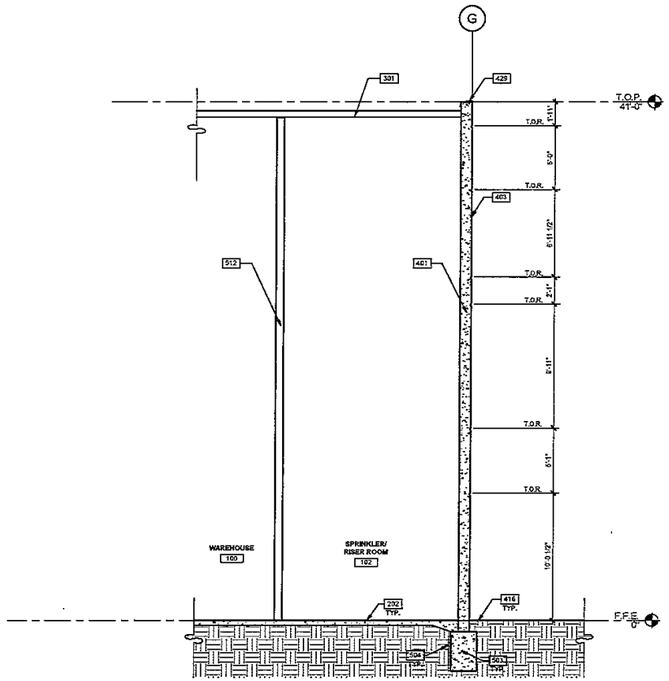
| | |
|---|---|
| PM/PM: | M. PULA |
| DRAWN BY: | S.R. |
| JOB NO.: | CH121-0193-00 |

SHEET
A5.4

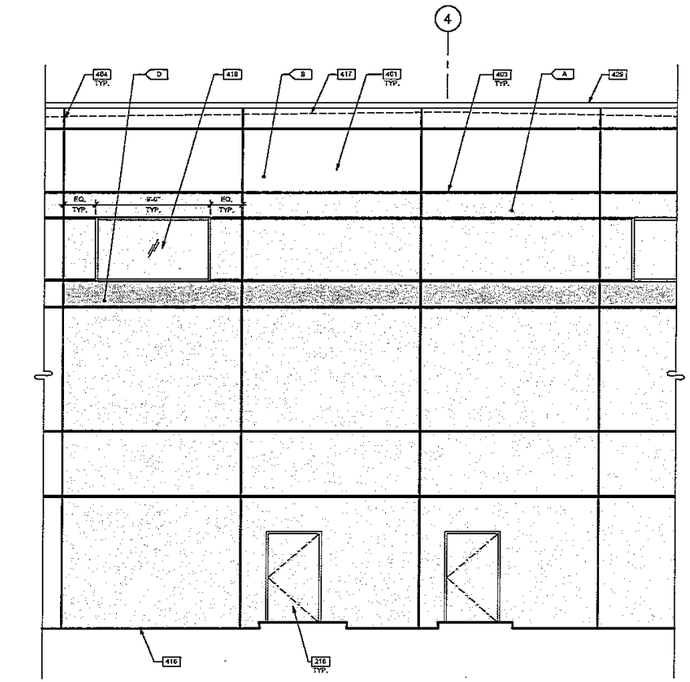
4/18/22

Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)

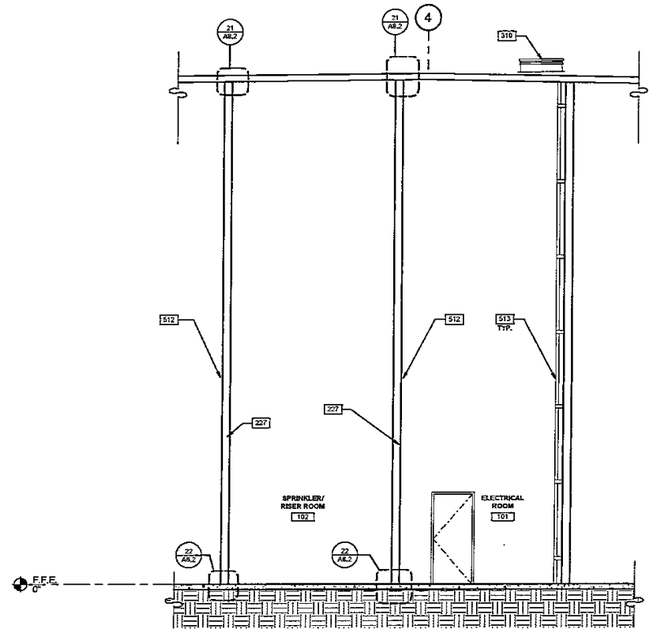
CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED P



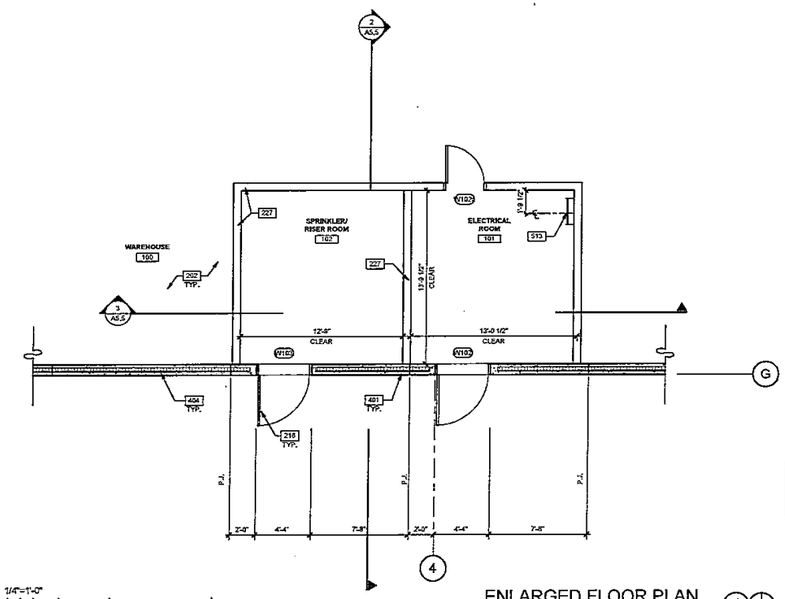

ENLARGED BUILDING SECTION
SCALE: 1/4" = 1'-0" (2)




ENLARGED EXTERIOR ELEVATION
SCALE: 1/4" = 1'-0" (1)




ENLARGED BUILDING SECTION
SCALE: 1/4" = 1'-0" (3)




ENLARGED FLOOR PLAN
SCALE: 1/4" = 1'-0" (4)

1/4"=1'-0"
0 2' 4' 8' 16'

## KEYNOTES:

SEE SHEET A0.2 FOR GENERAL NOTES:

202 CONCRETE SLAB. PROVIDE VAPOR RETARDER AT OFFICE AREA PER SOILS REPORT. PROVIDE SEALER FOR CONCRETE FLOOR AREA IN WAREHOUSE. REFER TO STRUCTURAL DRAWINGS.
216 SERVICEMAN DOORS, COLOR: TO MATCH ADJACENT CONCRETE PANEL COLOR.
227 SPRINKLER ROOM INTERIOR WALL TO BE 1HR RATED.
301 ROOF ASSEMBLY. REFER TO A0.2, ENVELOPE ASSEMBLY NOTES.
310 2'-6" x 2'-6" ROOF HATCH. VERIFY ROOF JOIST LOCATIONS WITH STRUCTURAL DRAWINGS. HATCH TO BE MINIMUM OF 10' FROM ROOF EDGE.
401 PRECAST CONCRETE WALL, PAINTED.
403 2" REVEAL.
404 CONCRETE WALL JOINT.
416 FINISH GRADE VARIES, REFER TO CIVIL.
417 LINE OF ROOF BEYOND.
418 CLERESTORY WINDOW 1" INSULATED GLAZING. REFER TO A0.2, ENVELOPE ASSEMBLY NOTES FOR GLAZING SPECIFICATION.
429 CONTINUOUS PRE-FINISH METAL COPING TO BE PROVIDED AT TOP OF ALL PANELS. COPING COLOR TO MATCH PAINT COLOR AT TOP OF EACH CONCRETE PANEL.
503 CONCRETE FOOTING, REFER TO STRUCTURAL.
504 PROVIDE RIGID INSULATION AT FOOTINGS AND WALL PANELS BELOW SLAB.
512 INTERIOR RATED WALL PARTITION.
513 ROOF ACCESS LADDER. COORDINATE LOCATION WITH STRUCTURAL ROOF FRAME DRAWINGS.

## WALL LEGEND

CONCRETE WALL

COLD FORMED STUD FRAMING WALL CONSTRUCTION. SEE NOTES ON PLAN FOR FIRE RATING

## LEGEND

GLASS:

VISION GLASS

COLORS:

PROVIDE 6'-0" WIDE PAINT COLOR MOCKUP FULL HEIGHT OF BUILDING FOR OWNER/ARCHITECT REVIEW. GC TO PROVIDE ARCHITECT DRAW DOWNS OF EACH PAINT COLOR.

A BASE COLOR: SHERWIN-WILLIAMS "SW 7642 - EVENING SHADOW"
B SHERWIN-WILLIAMS "7556 - PINESTONE"
C SHERWIN-WILLIAMS " 6256 - EVENING GRAY"
D SHERWIN-WILLIAMS "6794 - FLYWAY"

WARE MALCOMB
Birds of Brook Design Firm Registration No. EAE000099
ARCHITECTURE CIVIL ENGINEERING PLANNING INTERIORS BUILDING MEASUREMENT
315 SIXTH AVE 04TH FLOOR P 615.251.9060

GRANT A BRANDSBURG 001-028642 STATE OF ILLINOIS REGISTERED ARCHITECT EXP: 11 - 30 - 2022

THE MISSNER GROUP

MISSNER GROUP - PALATINE
2250 NORTH RAND ROAD
PALATINE, ILLINOIS 60074

ENLARGED ELEVATION, PLAN AND WALL SECTIONS

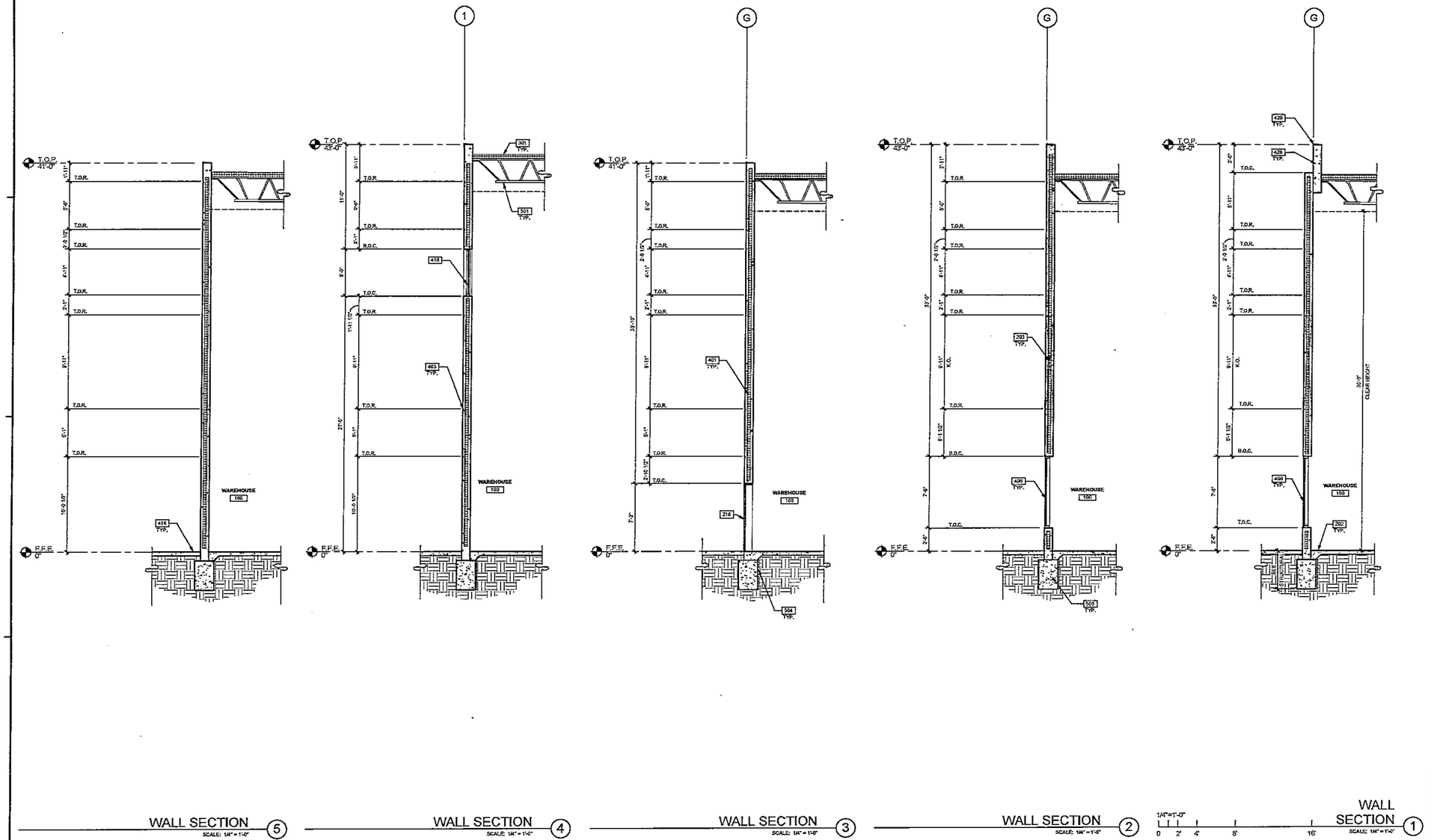
| DATE | REVISIONS/MARKUPS/REMARKS |
|---|---|
| 2022.04.04 | PERMIT SET |
| 2022.04.18 | |

| | |
|---|---|
| PA/PM: | N. PULA |
| DRAWN BY: | S.R. |
| JOB NO.: | CH21-0183-00 |

SHEET
A5.5

Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)

CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED S




## WALL LEGEND

- CONCRETE WALL
- COLD FORMED STUD FRAMING WALL CONSTRUCTION, SEE NOTES ON PLAN FOR FIRE RATING

## KEYNOTES:

SEE SHEET A0.2 FOR GENERAL NOTES

202 CONCRETE SLAB, PROVIDE VAPOR RETARDER AT OFFICE AREA PER SOILS REPORT, PROVIDE SEALER FOR CONCRETE FLOOR AREA IN WAREHOUSE. REFER TO STRUCTURAL DRAWINGS.
203 KNOCK-OUT PANEL FOR FUTURE WINDOWS OR DOORS.
216 SERVICE/MAN DOORS, COLOR: TO MATCH ADJACENT CONCRETE PANEL COLOR.
301 ROOF ASSEMBLY. REFER TO A0.2, ENVELOPE ASSEMBLY NOTES.
401 PRECAST CONCRETE WALL, PAINTED.
403 2" REVEAL.
406 ALUMINUM WINDOW SYSTEM WITH 1" INSULATED GLASS REFER TO A0.2, ENVELOPE ASSEMBLY NOTES.
416 FINISH GRADE VARIES. REFER TO CIVIL.
418 CLERESTORY WINDOW 1" INSULATED GLAZING. REFER TO A0.2, ENVELOPE ASSEMBLY NOTES FOR GLAZING SPECIFICATION.
426 PRECAST CONRETE SPANDREL PANEL, PAINTED
429 CONTINUOUS PRE-FINISH METAL COPING TO BE PROVIDED AT TOP OF ALL PANELS. COPING COLOR TO MATCH PAINT COLOR AT TOP OF EACH CONCRETE PANEL.
501 STRUCTURAL STEEL JOIST, REFER TO STRUCTURAL.
503 CONCRETE FOOTING, REFER TO STRUCTURAL.
504 PROVIDE RIGID INSULATION AT FOOTINGS AND WALL PANELS BELOW SLAB.

Made at Block Design Plan Registration No. 184.005099
WARE MALCOMB
ARCHITECTURE CIVIL ENGINEERING LANDSCAPE ARCHITECTURE INTERIORS BUILDING MEASUREMENT
131 S 2nd St, #410 Geneva, IL 60134 P 630.232.8000
GRANT A. BRANDENBURG 001-020642
EXP: 11 - 30 - 2022
THE MISSNER GRP

MISSNER GROUP - PALATINE
2250 NORTH RAND ROAD
PALATINE, ILLINOIS 60074

WALL SECTIONS

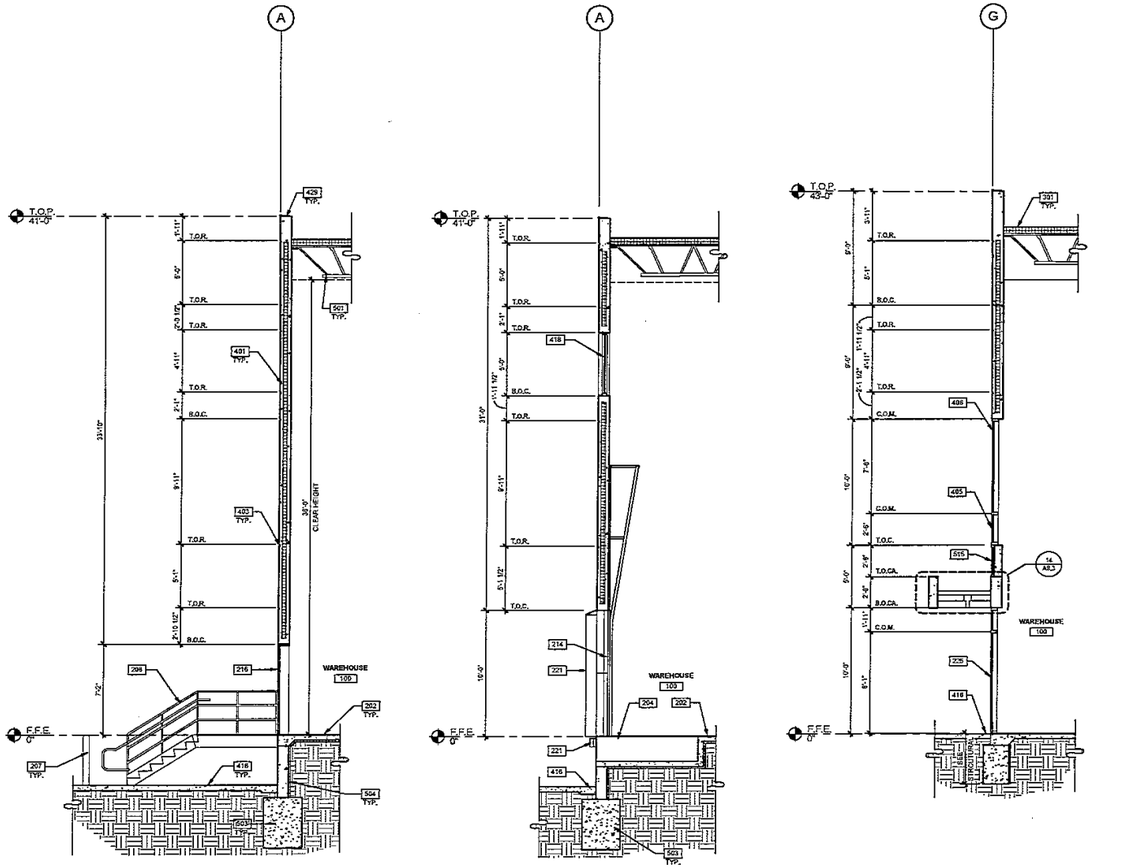
| DATE | REMARKS |
|---|---|
| 2022.02.04 | PROGRESS PACKAGE |
| 2022.04.05 | PERMIT SET |

| | |
|---|---|
| PAPM: | M. PULA |
| DRAWN BY: | S.R. |
| JOB NO.: | CH21-0193-00 |

SHEET
A5.6

Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)

CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED P




WALL SECTION 3 — SCALE: 1/4" = 1'-0"

WALL SECTION 2 — SCALE: 1/4" = 1'-0"

WALL SECTION 1 — SCALE: 1/4" = 1'-0"

1/4"=1'-0"
0 2' 4' 8' 16'

## WALL LEGEND

CONCRETE WALL

COLD FORMED STUD FRAMING WALL CONSTRUCTION. SEE NOTES ON PLAN FOR FIRE RATING

## KEYNOTES:

SEE SHEET A0.2 FOR GENERAL NOTES

202 CONCRETE SLAB. PROVIDE VAPOR RETARDER AT OFFICE AREA PER SOILS REPORT. PROVIDE SEALER FOR CONCRETE FLOOR AREA IN WAREHOUSE. REFER TO STRUCTURAL DRAWINGS.
204 6'X 8' MECHANICAL DOCK LEVELER, 35,000 LBS DYNAMIC CAPACITY, MANUALLY OPERATED (SPRING ASSISTED). REFER TO A0.2 ENVELOPE ASSEMBLY NOTES.
206 EXTERIOR STEEL STAIR, ALL COMPONENTS GALVANIZED.
207 STEEL BOLLARD, CONCRETE-FILLED PAINTED SAFETY YELLOW.
214 HIGH LIFT OVERHEAD SECTIONAL DOOR, REFER TO A0.2, ENVELOPE ASSEMBLY NOTES.
216 SERVICEMAN DOORS, COLOR: TO MATCH ADJACENT CONCRETE PANEL COLOR.
221 DOCK SEAL
225 ALUMINUM STOREFRONT SYSTEM WITH 1" INSULATED GLASS, REFER TO A0.2, ENVELOPE ASSEMBLY NOTES FOR GLAZING SPECIFICATION.
301 ROOF ASSEMBLY, REFER TO A0.2, ENVELOPE ASSEMBLY NOTES.
401 PRECAST CONCRETE WALL, PAINTED.
403 2" REVEAL.
405 ALUMINUM STOREFRONT SYSTEM - SPANDREL PANEL, REFER TO A0.2, ENVELOPE ASSEMBLY NOTES FOR GLAZING SPECIFICATION.
406 ALUMINUM WINDOW SYSTEM WITH 1" INSULATED GLASS REFER TO A0.2, ENVELOPE ASSEMBLY NOTES.
416 FINISH GRADE VARIES, REFER TO CIVIL.
418 CLERESTORY WINDOW 1" INSULATED GLAZING. REFER TO A0.2, ENVELOPE ASSEMBLY NOTES FOR GLAZING SPECIFICATION.
428 CONTINUOUS PRE-FINISH METAL COPING TO BE PROVIDED AT TOP OF ALL PANELS, COPING COLOR TO MATCH PAINT COLOR AT TOP OF EACH CONCRETE PANEL.
501 STRUCTURAL STEEL JOIST, REFER TO STRUCTURAL.
503 CONCRETE FOOTING, REFER TO STRUCTURAL.
504 PROVIDE RIGID INSULATION AT FOOTINGS AND WALL PANELS BELOW SLAB.
515 2 1/2" WIDE STOREFRONT SYSTEM INSTALLED IN FRONT OF THE CONCRETE SPANDREL PANEL.

State of Illinois Design Firm Registration No. 184-001069
WARE MALCOMB
ARCHITECTURE CIVIL ENGINEERING
PLANNING LANDSCAPE
INTERIORS BUILDING MEASUREMENT
1135 22nd St. #410
Oak Brook, IL 60523
P 630.218.0003

BRANT A BRANDENBURG 001-021644
REGISTERED ARCHITECT
STATE OF ILLINOIS
EXP: 11 - 30 - 2022

THE MISSNER GROUP

WALL SECTIONS

| DATE | REMARKS |
|---|---|
| 2022.04.04 | PERMIT SET |

MISSNER GROUP - PALATINE
2250 NORTH RAND ROAD
PALATINE, ILLINOIS 60074

| | |
|---|---|
| PM/PM: | Approver |
| DRAWN BY.: | Author |
| JOB NO.: | CH21-0193.00 |

SHEET
A5.7

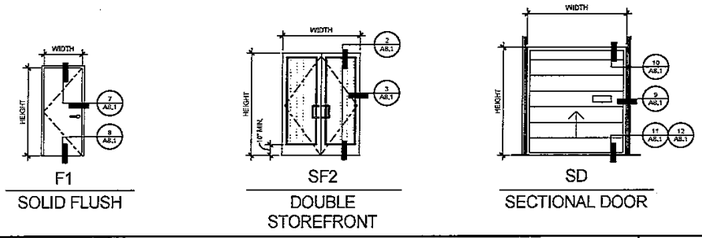
Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)

CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED I

# DOOR SCHEDULE

| DOOR NO. | ROOM NAME | DOOR TYPE | DOOR WIDTH | DOOR HEIGHT | DOOR THICK | DOOR MATERIAL | DOOR FINISH | FRAME MATERIAL | FRAME FINISH | FIRE RATING | HDWARE NO. | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 100 | WAREHOUSE | SF2 | 6'-0" | 6'-0" | 1 3/4" | ALUMINUM STOREFRONT | CLEAR ANODIZED | ALUMINUM STOREFRONT | CLEAR ANODIZED | | 2,1 | |
| W101 | WAREHOUSE | F1 | 3'-0" | 7'-0" | 1 3/4" | HOLLOW METAL | PAINTED | HOLLOW METAL | PAINTED | | 1,1 | |
| W102 | ELECTRICAL ROOM | F1 | 6'-0" | 7'-0" | 1 3/4" | HOLLOW METAL | PAINTED | HOLLOW METAL | PAINTED | | 1,1B | |
| W102a | ELECTRICAL ROOM | F1 | 3'-0" | 7'-0" | 1 3/4" | HOLLOW METAL | PAINTED | HOLLOW METAL | PAINTED | | 3,1 | |
| W103 | SPRINKLER RISER ROOM | F1 | 6'-0" | 7'-0" | 1 3/4" | HOLLOW METAL | PAINTED | HOLLOW METAL | PAINTED | | 1,1 | |
| W134 | WAREHOUSE | F1 | 3'-0" | 7'-0" | 1 3/4" | HOLLOW METAL | PAINTED | HOLLOW METAL | PAINTED | | 1,1 | |
| W135 | WAREHOUSE | F1 | 3'-0" | 7'-0" | 1 3/4" | HOLLOW METAL | PAINTED | HOLLOW METAL | PAINTED | | 1,1 | |
| W136 | WAREHOUSE | F1 | 3'-0" | 7'-0" | 1 3/4" | HOLLOW METAL | PAINTED | HOLLOW METAL | PAINTED | | 1,1 | |
| W107 | WAREHOUSE | SF2 | 6'-0" | 6'-0" | 1 3/4" | ALUMINUM STOREFRONT | CLEAR ANODIZED | ALUMINUM STOREFRONT | CLEAR ANODIZED | | 2,1 | |
| W108 | WAREHOUSE | F1 | 3'-0" | 7'-0" | 1 3/4" | HOLLOW METAL | PAINTED | HOLLOW METAL | PAINTED | | 1,1 | |
| W109 | WAREHOUSE | F1 | 3'-0" | 7'-0" | 1 3/4" | HOLLOW METAL | PAINTED | HOLLOW METAL | PAINTED | | 1,1 | |
| W110 | WAREHOUSE | F1 | 3'-0" | 7'-0" | 1 3/4" | HOLLOW METAL | PAINTED | HOLLOW METAL | PAINTED | 45min | 1,1 | |
| W111 | WAREHOUSE | F1 | 3'-0" | 7'-0" | 1 3/4" | HOLLOW METAL | PAINTED | HOLLOW METAL | PAINTED | | 1,1 | |
| W112 | WAREHOUSE | F1 | 3'-0" | 7'-0" | 1 3/4" | HOLLOW METAL | PAINTED | HOLLOW METAL | PAINTED | | 1,1 | |
| W113 | WAREHOUSE | F1 | 3'-0" | 7'-0" | 1 3/4" | HOLLOW METAL | PAINTED | HOLLOW METAL | PAINTED | | 1,1 | |
| W114 | WAREHOUSE | F1 | 3'-0" | 7'-0" | 1 3/4" | HOLLOW METAL | PAINTED | HOLLOW METAL | PAINTED | | 1,1 | |
| W115 | WAREHOUSE | F1 | 3'-0" | 7'-0" | 1 3/4" | HOLLOW METAL | PAINTED | HOLLOW METAL | PAINTED | | 1,1 | |
| W116 | WAREHOUSE | F1 | 3'-0" | 7'-0" | 1 3/4" | HOLLOW METAL | PAINTED | HOLLOW METAL | PAINTED | 90min | 1,1 | |
| W117 | WAREHOUSE | F1 | 3'-0" | 7'-0" | 1 3/4" | HOLLOW METAL | PAINTED | HOLLOW METAL | PAINTED | 45min | 1,1 | |
| W118 | WAREHOUSE | F1 | 3'-0" | 7'-0" | 1 3/4" | HOLLOW METAL | PAINTED | HOLLOW METAL | PAINTED | | 1,1 | |
| W119 | WAREHOUSE | F1 | 3'-0" | 7'-0" | 1 3/4" | HOLLOW METAL | PAINTED | HOLLOW METAL | PAINTED | | 1,1 | |
| W120 | WAREHOUSE | SD2 | 12'-0" | 14'-0" | 2" | STEEL | PAINT | | | | 4,1 | |
| W201 | WAREHOUSE | SD1 | 6'-0" | 18'-0" | 2" | STEEL | PAINT | | | | 4,1 | |
| W202 | WAREHOUSE | SD1 | 6'-0" | 18'-0" | 2" | STEEL | PAINT | | | | 4,1 | |
| W203 | WAREHOUSE | SD1 | 6'-0" | 18'-0" | 2" | STEEL | PAINT | | | | 4,1 | |
| W204 | WAREHOUSE | SD1 | 6'-0" | 18'-0" | 2" | STEEL | PAINT | | | | 4,1 | |
| W205 | WAREHOUSE | SD1 | 6'-0" | 18'-0" | 2" | STEEL | PAINT | | | | 4,1 | |
| W206 | WAREHOUSE | SD1 | 6'-0" | 13'-0" | 2" | STEEL | PAINT | | | | 4,1 | |
| W207 | WAREHOUSE | SD1 | 6'-0" | 13'-0" | 2" | STEEL | PAINT | | | | 4,1 | |
| W208 | WAREHOUSE | SD1 | 6'-0" | 13'-0" | 2" | STEEL | PAINT | | | | 4,1 | |
| W209 | WAREHOUSE | SD1 | 6'-0" | 13'-0" | 2" | STEEL | PAINT | | | | 4,1 | |
| W210 | WAREHOUSE | SD1 | 6'-0" | 13'-0" | 2" | STEEL | PAINT | | | | 4,1 | |
| W211 | WAREHOUSE | SD1 | 6'-0" | 13'-0" | 2" | STEEL | PAINT | | | | 4,1 | |
| W212 | WAREHOUSE | SD1 | 6'-0" | 18'-0" | 2" | STEEL | PAINT | | | | 4,1 | |
| W213 | WAREHOUSE | SD1 | 6'-0" | 18'-0" | 2" | STEEL | PAINT | | | | 4,1 | |
| W214 | WAREHOUSE | SD1 | 6'-0" | 18'-0" | 2" | STEEL | PAINT | | | | 4,1 | |
| W215 | WAREHOUSE | SD1 | 6'-0" | 18'-0" | 2" | STEEL | PAINT | | | | 4,1 | |
| W216 | WAREHOUSE | SD1 | 6'-0" | 18'-0" | 2" | STEEL | PAINT | | | | 4,1 | |
| W217 | WAREHOUSE | SD1 | 6'-0" | 12'-0" | 2" | STEEL | PAINT | | | | 4,1 | |
| W218 | WAREHOUSE | SD1 | 6'-0" | 12'-0" | 2" | STEEL | PAINT | | | | 4,1 | |
| W219 | WAREHOUSE | SD1 | 6'-0" | 12'-0" | 2" | STEEL | PAINT | | | | 4,1 | |
| W220 | WAREHOUSE | SD1 | 6'-0" | 12'-0" | 2" | STEEL | PAINT | | | | 4,1 | |
| W221 | WAREHOUSE | SD2 | 12'-0" | 14'-0" | 2" | STEEL | PAINT | | | | 4,1 | |

## DOOR TYPES




## DOOR HARDWARE

**SINGLE EXTERIOR DOOR**
1,3

3EA HINGES (4EA IF DOOR IS 4X2)
1EA CYLINDRICAL LEVER LOCK (QC TO VERIFY LOCK FUNCTION W/ OWNER
1EA FSIC INTERCHANGEABLE CORE
1EA DOOR CLOSER
1EA INTERIOR KICK PLATE
1EA THRESHOLD
1EA WEATHERSTRIP
1EA DOOR SWEEP
1EA RAIN GUARD

SEE DOOR SCHEDULE FOR REQUIRED FIRE RATING

**SINGLE EXTERIOR DOOR - ELECTRICAL ROOM**
1,1B

4EA HINGE
1EA EXIT DEVICE
1EA EXTERIOR TRIM WITH LEVER
1EA FSIC INTERCHANGEABLE CORE
1EA RIM CYLINDER
1EA DOOR CLOSER
1EA INTERIOR KICK PLATE
1EA THRESHOLD
1EA WEATHERSTRIP
1EA DOOR SWEEP
1EA RAIN GUARD

**STOREFRONT DOUBLE DOORS**
2,1

2EA PIVOT SET
4EA PIVOT
1EA 3PT DEADLOCK
1EA INDICATOR LEVER SET
1EA RIM CYLINDER
1EA FSIC INTERCHANGEABLE CORE
1EA DOOR CLOSER
1EA PUSH / PULL BAR
1EA THRESHOLD
1EA DOOR SWEEP

**SINGLE INTERIOR DOOR - ELECTRICAL ROOM**
3,1

3EA HINGE
1EA EXIT DEVICE
1EA EXTERIOR TRIM WITH LEVER
1EA FSIC INTERCHANGEABLE CORE
1EA RIM CYLINDER
1EA DOOR CLOSER
1EA KICK PLATE
1EA HEAVY DUTY DOORSTOP

**SECTIONAL OVERHEAD DOOR**
4,1

1 SLIDE BOLT
1 PAD LOCK

QC TO VERIFY ALL NECESSARY HARDWARE WITH OVERHEAD DOOR MANUFACTURER

## GENERAL NOTES

SEE SHEET A0.2 FOR GENERAL DOOR NOTES

1. REFER TO THE PARTITION PLAN AND SPECIFICATIONS (IF PROVIDED) FOR ADDITIONAL DOOR INFORMATION.
2. HOLLOW METAL DOORS TO BE PAINTED SAME COLOR AS THE ADJACENT WALL; FINISH TO BE SEMI-GLOSS. SEE FINISH SCHEDULE FOR ADDITIONAL INFORMATION.
3. PROVIDE RATED WIRE GLASS IN RATED ASSEMBLIES, U.O.N.
4. FIELD VERIFY OPENING WIDTH AND HEIGHT FOR ALL NEW DOORS IN EXISTING OPENINGS.
5. ALL HOLLOW METAL FRAMES TO BE WELDED TYPE, U.O.N.
6. RATED DOORS SHALL HAVE AUTOMATIC CLOSERS AND COMPLY WITH REQUIREMENTS OF ALL GOVERNING CODES & STANDARDS.

WARE MALCOMB
Roots of Whole Design Firm Registration No. EAA0004069
ARCHITECTURE CIVIL ENGINEERING PLANNING INTERIORS
1515 22nd St #410 Oak Brook, IL 60523 P 630.574.8300

THE MISSNER GROUP

DOOR SCHEDULE

| DATE | REMARKS |
|---|---|
| 2022.07.04 | PERMIT SET |
| 2022.10.03 | PERMIT SET |

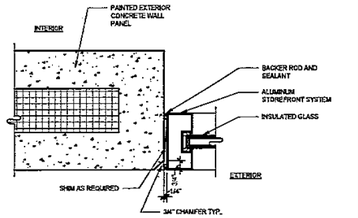
| | |
|---|---|
| PAPM: | M. PULA |
| DRAWN BY: | S.R. |
| JOB NO.: | CH21-0193-20 |

SHEET
A7.1

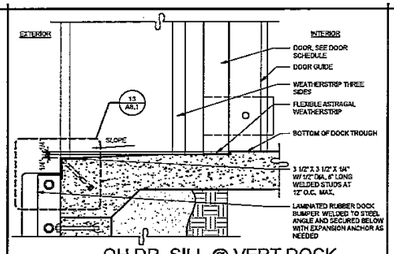
MISSNER GROUP - PALATINE
2250 NORTH RAND ROAD
PALATINE, ILLINOIS 60074

Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)

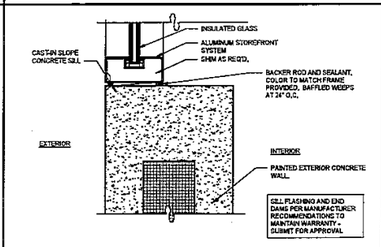
CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED P



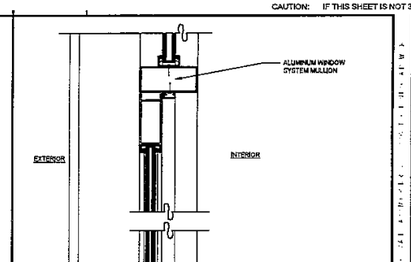

WINDOWS JAMB @ CON. WALL 16
SCALE: 3" = 1'-0"



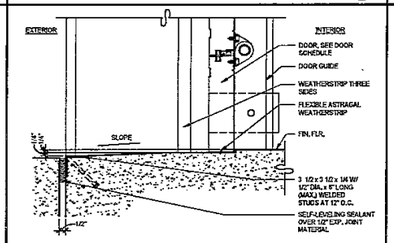

OH DR. SILL @ VERT DOCK TROUGH 11
SCALE: 3" = 1'-0"



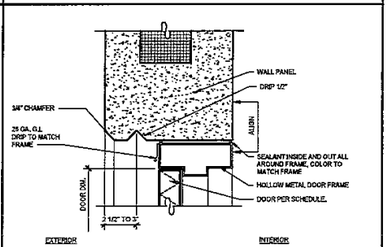

WINDOW SILL 6
SCALE: 3" = 1'-0"



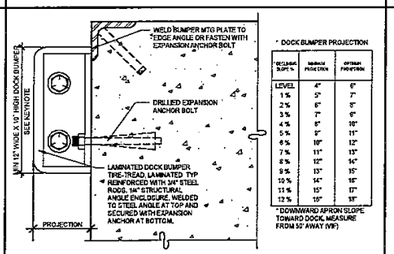

STOREFRONT DOOR 2
SCALE: 3" = 1'-0"



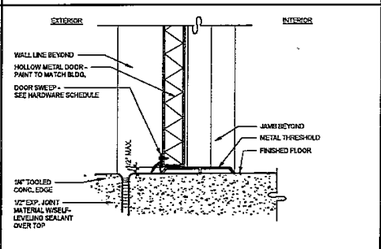

OH DOOR SILL AT GRADE 12
SCALE: 3" = 1'-0"



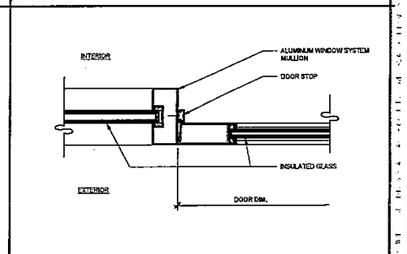

HOLLOW METAL DOOR HEAD 7
SCALE: 3" = 1'-0"



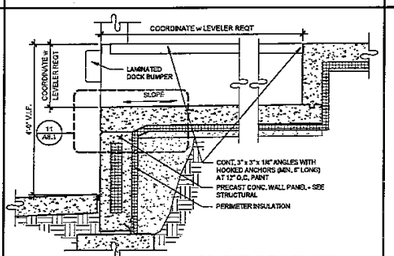

DOCK BUMPER 13
SCALE: 3" = 1'-0"



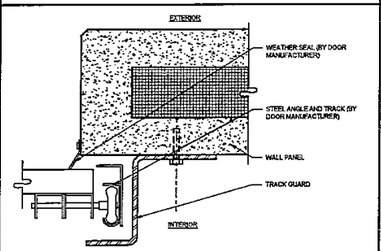

HOLLOW METAL DOOR SILL 8
SCALE: 3" = 1'-0"



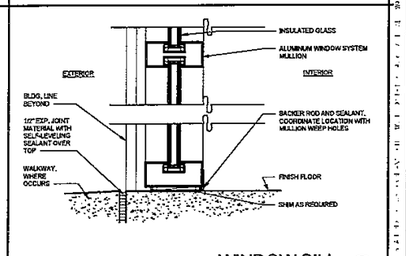

STOREFRONT JAMB 3
SCALE: 3" = 1'-0"



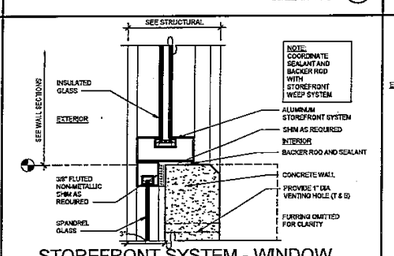

DOCK LEVELER PIT SECTION 14
SCALE: 3/4" = 1'-0"



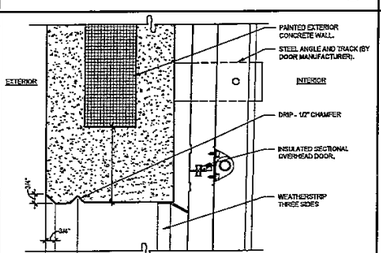

SECTIONAL DOOR JAMB W/ GUARD 9
SCALE: 3" = 1'-0"



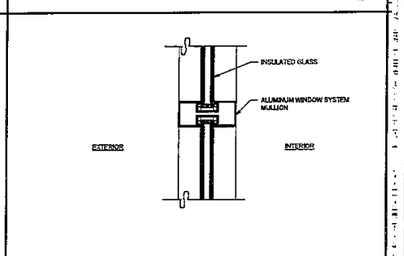

WINDOW SILL 4
SCALE: 3" = 1'-0"




STOREFRONT SYSTEM - WINDOW SILL 15
SCALE: 3" = 1'-0"




SECTIONAL DOOR HEAD 10
SCALE: 3" = 1'-0"




TYP. VERT./HORIZ. MULLION 5
SCALE: 3" = 1'-0"

Rate of Knots Design Firm Registration No. 184004699

WARE MALCOMB
ARCHITECTURE PLANNING INTERIORS
CIVIL ENGINEERING LANDSCAPE ARCHITECTURE BUILDING MEASUREMENT
1515 22nd St. #410 Oak Brook, IL 60523 P 630.218.0003

DEANT A BRANDENBURG 001-026842 LICENSED ARCHITECT STATE OF ILLINOIS
EXP: 11 - 30 - 2022

THE MISSNER GRO

MISSNER GROUP - PALATINE
2250 NORTH RAND ROAD
PALATINE, ILLINOIS 60074

DETAILS

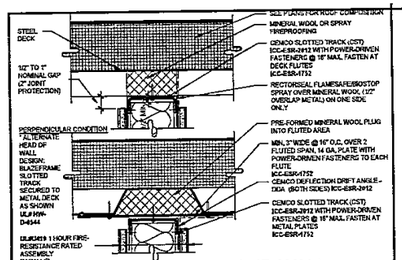
| DATE | REMARKS |
|---|---|
| 2022.03.04 | PROGRESS PACKAGE |
| 2022.04.19 | ISSUED SET |

PA/PM: M. PULA
DRAWN BY: S.R.
JOB NO.: CH21-0190-00

SHEET
A8.1

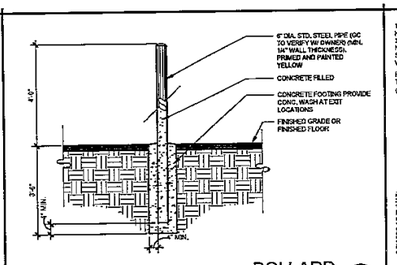
Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)

CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED PRINT



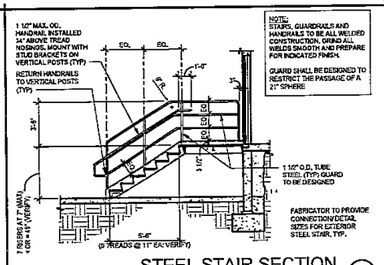

UL U419 1-HOUR WALL (21)

SCALE: 3" = 1'-0"



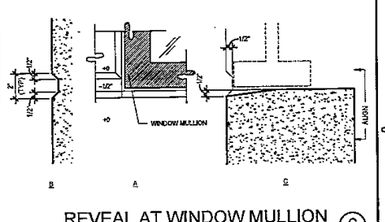

BOLLARD (16)

SCALE: 1/2" = 1'-0"



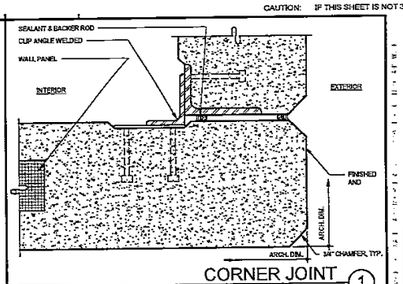

STEEL STAIR SECTION (11)

SCALE: 1/4" = 1'-0"



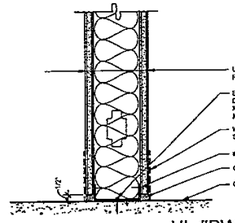

REVEAL AT WINDOW MULLION (6)

SCALE: 3" = 1'-0"




CORNER JOINT (1)

SCALE: 3" = 1'-0"




UL #BW-S-0001
1 HOUR WALL BASE (22)

1 HOUR FIRE-RESISTANCE RATED WALL

SCALE: 3" = 1'-0"

MEMBER DEPTH:
(EXAMPLE: 6" = 600 X 1/100 INCHES)
ALL MEMBER DEPTHS ARE TAKEN IN 1/100 INCHES. FOR ALL "I" SECTIONS MEMBER DEPTH IS THE INSIDE DIMENSION.

FLANGE WIDTH:
(EXAMPLE: 1 5/8" = 1.625" = 162.5 1/100 INCHES)
ALL FLANGE WIDTHS ARE TAKEN IN 1/100 INCHES.

600 S 162 54

STYLE:
(EXAMPLE: STUD OR JOIST SECTION = S)
THE FOUR ALPHA CHARACTERS UTILIZED BY THE DESIGNATOR SYSTEM ARE:
S = STUD OR JOIST, T = TRACK, U = CHANNEL
F = FURRING

MATERIAL THICKNESS:
(EXAMPLE: 0.054 IN. = 54 MILS; 1 MIL = 1/1000 IN.)
MATERIAL THICKNESS IS THE MINIMUM BASE METAL THICKNESS IN MILS. MINIMUM BASE METAL THICKNESS REPRESENTS 95% OF THE DESIGN THICKNESS.

INTERIOR NON-STRUCTURAL NON-COMPOSITE:

USE CLIP ANGLE IF SUPPORTED MAY LOAD

| (S) STUD MEMBER | SPACING (IN.) O.C. | S PSF L/240 |
|---|---|---|
| 350S125-18 | 12" | 19'-6" |
| 350S125-18 | 16" | 9'-7" |
| 350S125-18 | 24" | 6'-3" |
| 362S125-33 | 12" | 33'-2" |
| 362S125-33 | 16" | 32'-8" |
| 362S125-33 | 24" | 31'-9" |
| 362S125-43 | 12" | 43'-1" |
| 362S125-43 | 16" | 42'-6" |
| 362S125-43 | 24" | 41'-5" |

| (S) STUD MEMBER | SPACING (IN.) O.C. | S PSF L/240 |
|---|---|---|
| 362S125-54 | 12" | 54'-6" |
| 362S125-54 | 16" | 53'-8" |
| 362S125-54 | 24" | 52'-3" |
| 362S125-54 (50 KSI) | 12" | 55'-3" |
| 362S125-54 (50 KSI) | 16" | 54'-5" |
| 362S125-54 (50 KSI) | 24" | 53'-0" |
| 362S125-68 (50 KSI) | 12" | 69'-8" |
| 362S125-68 (50 KSI) | 16" | 68'-7" |
| 362S125-68 (50 KSI) | 24" | 66'-10" |

| (S) STUD MEMBER | SPACING (IN.) O.C. | S PSF L/240 |
|---|---|---|
| 400S125-43 | 12" | 35'-9" |
| 400S125-43 | 16" | 34'-10" |
| 400S125-43 | 24" | 33'-5" |
| 400S125-54 (50 KSI) | 12" | 44'-2" |
| 400S125-54 (50 KSI) | 16" | 43'-3" |
| 400S125-54 (50 KSI) | 24" | 41'-9" |
| 400S125-68 (50 KSI) | 12" | 55'-8" |
| 400S125-68 (50 KSI) | 16" | 54'-5" |
| 400S125-68 (50 KSI) | 24" | 52'-6" |

| (S) STUD MEMBER | SPACING (IN.) O.C. | S PSF L/240 |
|---|---|---|
| 600S125-27 [2] | 12" | 24'-4" ● |
| 600S125-27 [2] | 16" | 21'-4" ● |
| 600S125-27 [2] | 24" | 17'-7" ● |
| 600S125-33 | 12" | 28'-2" |
| 600S125-33 | 16" | 25'-8" |
| 600S125-33 | 24" | 20'-4" |
| 600S125-43 | 12" | 39'-8" |
| 600S125-43 | 16" | 28'-1" |
| 600S125-43 | 24" | 22'-10" |
| 600S125-54 (50 KSI) | 12" | 30'-8" |
| 600S125-54 (50 KSI) | 16" | 27'-11" |
| 600S125-54 (50 KSI) | 24" | 24'-5" |
| 600S125-68 (50 KSI) | 12" | 33'-8" |
| 600S125-68 (50 KSI) | 16" | 30'-6" |
| 600S125-68 (50 KSI) | 24" | 26'-2" |
| 800S125-54 (50 KSI) | 12" | 38'-0" |
| 800S125-54 (50 KSI) | 16" | 35'-2" |
| 800S125-54 (50 KSI) | 24" | 30'-9" |
| 800S125-68 (50 KSI) | 12" | 41'-11" |
| 800S125-68 (50 KSI) | 16" | 38'-4" |
| 800S125-68 (50 KSI) | 24" | 33'-4" |

● INDICATES THAT WEB STIFFENERS ARE REQUIRED AT ENDS

NOTE: ALL STUD INFORMATION IS BASED ON: STEEL STUD MANUFACTURERS ASSOCIATION (SSMA) ICC ESR-2164P

LIMITING WALL HEIGHT TABLE-L/240 (18)

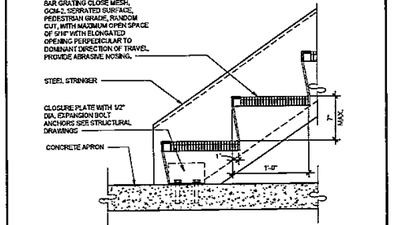
SCALE: 1/2" = 1'-0"

WALL TYPE NOTES:

1. INTERIOR GYP. BD. WALLS SHALL CONFORM TO ICC-ESR-1229
2. SEE LIMITING WALL HEIGHT TABLE FOR METAL STUD GAUGE AND SPACING BASED ON WALL HEIGHTS AND STUD SIZES AS NOTED ON EACH WALL TYPE.
3. MAX. STUD SPACING SHALL BE 24".
4. MINIMUM FASTENER SIZE SHALL BE #6 - 1-1/4" SCREWS.
5. MAXIMUM FASTENER SPACING SHALL BE 12" FIELD AND 8" AT EDGES.
6. ALL WALL STUDS TO BE 3-5/8", U.O.N.
7. ALL RESTROOM WALL STUDS TO BE 6" AND FULLY INSULATED, U.O.N.

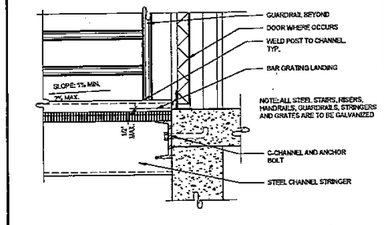
WALL TYPE NOTES (19)

SCALE: 1/2" = 1'-0"



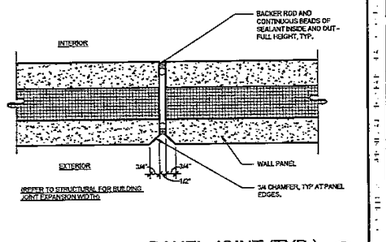

STEEL STAIR @ BOTTOM (12)

SCALE: 1 1/2" = 1'-0"



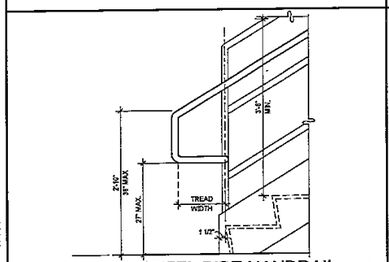

STEEL STAIR LANDING (7)

SCALE: 1 1/2" = 1'-0"



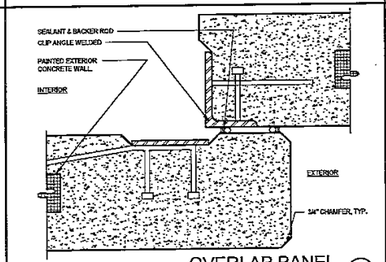

PANEL JOINT (TYP.) (2)

SCALE: 3" = 1'-0"



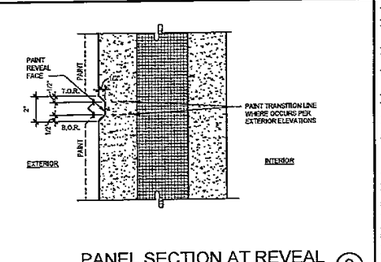

STEEL PIPE HANDRAIL (13)

SCALE: 1" = 1'-0"



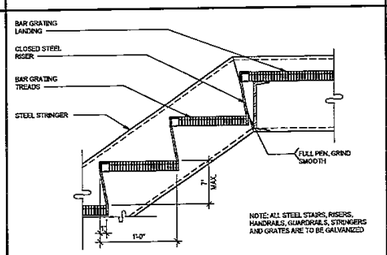

OVERLAP PANEL (8)

SCALE: 3" = 1'-0"



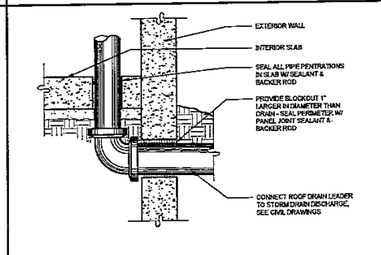

PANEL SECTION AT REVEAL (3)

SCALE: 3" = 1'-0"



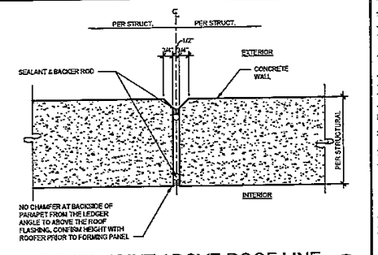

STEEL STAIR TREADS (14)

SCALE: 1 1/2" = 1'-0"



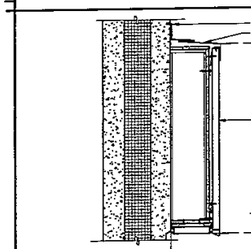

ROOF DRAIN EXITING (9)

SCALE: 1 1/2" = 1'-0"



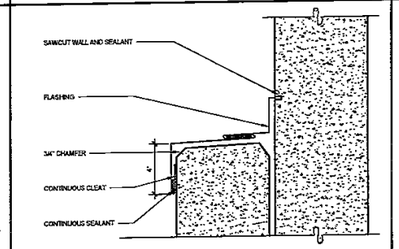

PANEL JOINT ABOVE ROOF LINE (4)

SCALE: 3" = 1'-0"



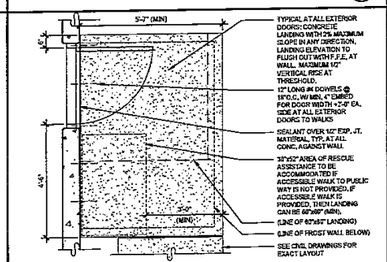

CANOPY WALL SECTION, MIR. (25)

SCALE: 1 1/2" = 1'-0"



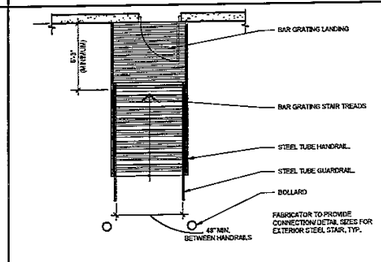

WALL FLASHING (20)

SCALE: 3" = 1'-0"



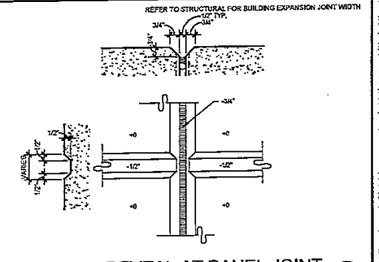

CONCRETE LANDING (15)

SCALE: 1/2" = 1'-0"




EXTERIOR STEEL STAIR PLAN (10)

SCALE: 1/4" = 1'-0"




REVEAL AT PANEL JOINT (5)

SCALE: 3" = 1'-0"

Blake of Brick Design Firm Registration No. 184.004089
WARE MALCOMB
ARCHITECTURE CIVIL ENGINEERING
PLANNING BRANDING
INTERIORS BUILDING MEASUREMENT
1295 STATE ROAD
CUYAHOGA FALLS, OHIO 44223
P 330.376.2000

GRANT A. BRANDENBURG
6201-020642
REGISTERED ARCHITECT
EXP: 11 - 30 - 2022

THE MISSNER GROUP

MISSNER GROUP -
PALATINE
2250 NORTH RAND ROAD
PALATINE, ILLINOIS 60074

DETAILS

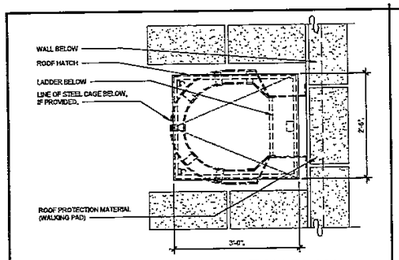
| ISSUE | REMARKS |
|---|---|
| 2022.04.04 | PROGRESS PACKAGE |
| 2022.04.08 | PERMIT SET |

| | |
|---|---|
| PA/PM: | N. PULA |
| DRAWN BY: | S.R. |
| JOB NO.: | CH21-0180 |

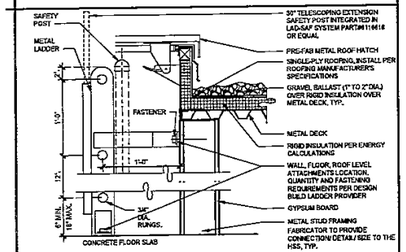
SHEET
A8.2

Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)

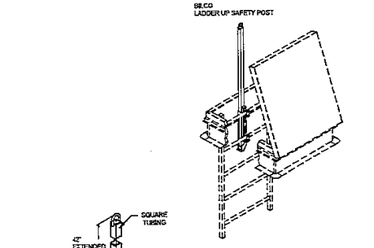
CAUTION: IF THIS SHEET IS NOT 30"x42" IT IS A REDUCED PRINT



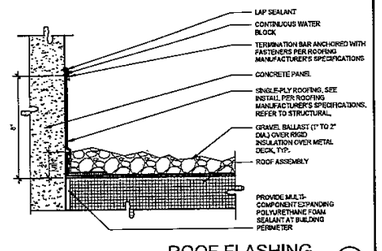

ROOF HATCH PLAN 21
SCALE: 3/4" = 1'-0"



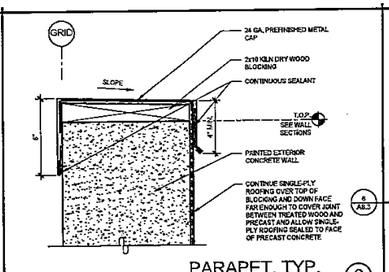

ROOF HATCH & LADDER 22
SCALE: 1 1/2" = 1'-0"



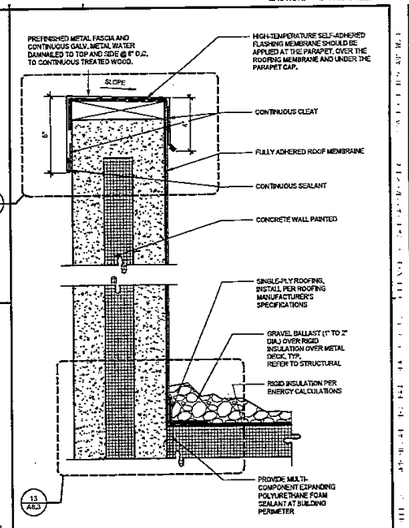

SAFETY POST 17
SCALE: 1" = 1'-0"



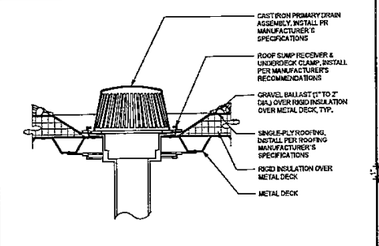

ROOF FLASHING 11
SCALE: 3" = 1'-0"



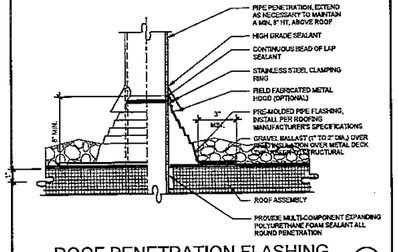

PARAPET, TYP. 6
SCALE: 3" = 1'-0"



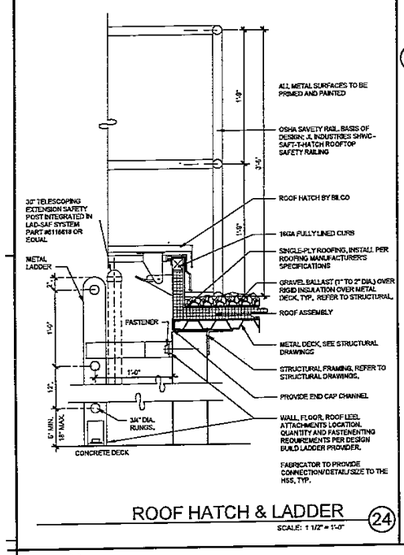

SINGLE-PLY ROOFING @ PARAPET 2
SCALE: 3" = 1'-0"



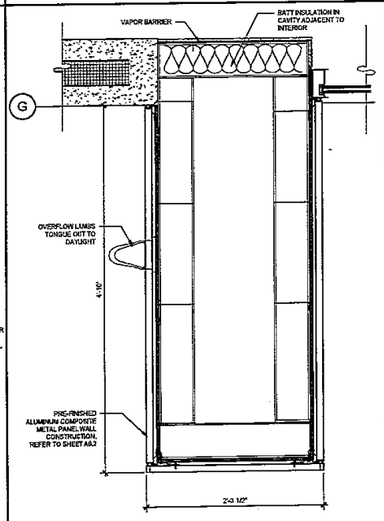

DRAIN 12
SCALE: 1 1/2" = 1'-0"



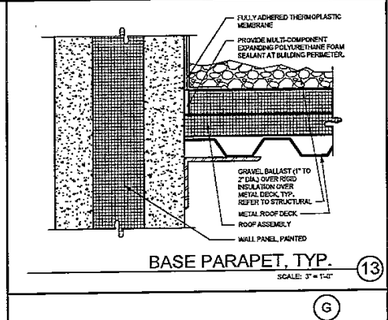

ROOF PENETRATION FLASHING 7
SCALE: 3" = 1'-0"



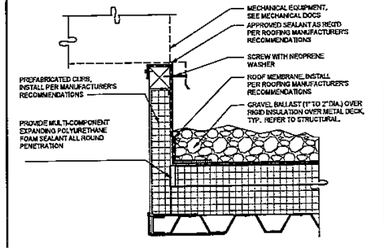

ROOF HATCH & LADDER 24
SCALE: 1 1/2" = 1'-0"



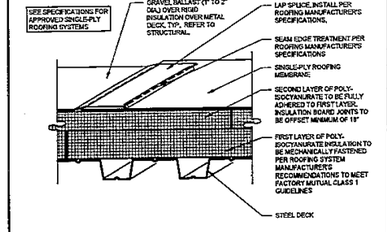

WING WALL PLAN SECTION, SIM. 19
SCALE: 1 1/2" = 1'-0"



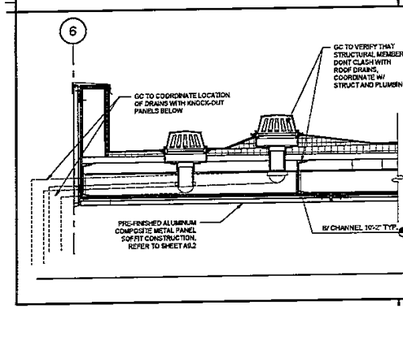

BASE PARAPET, TYP. 13
SCALE: 3" = 1'-0"



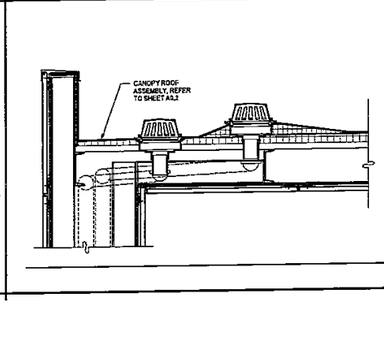

ROOFING @ PREFABRICATED CURB 8
SCALE: 3" = 1'-0"



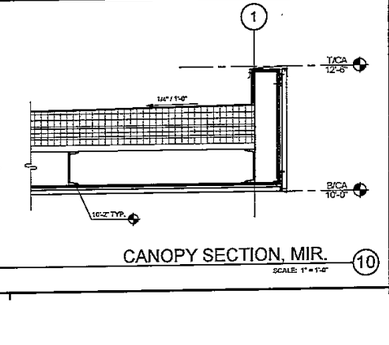

SINGLE-PLY ROOFING SECTION 3
SCALE: 3" = 1'-0"



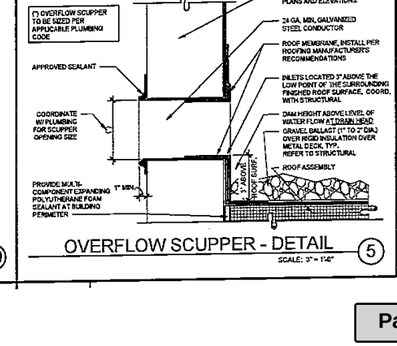

CENTRAL CANOPY SECTION 20
SCALE: 1" = 1'-0"




CANOPY SECTION 14
SCALE: 1" = 1'-0"




ROOF PENETRATION FLASHING 9
SCALE: 3" = 1'-0"




OVERFLOW SCUPPER - ELEVATION 4
SCALE: 1" = 1'-0"




CANOPY SECTION, MIR. 10
SCALE: 1" = 1'-0"




OVERFLOW SCUPPER - DETAIL 5
SCALE: 3" = 1'-0"

WARE MALCOMB
ARCHITECTURE CIVIL ENGINEERING PLANNING LANDSCAPE ARCHITECTURE INTERIORS BUILDING MEASUREMENT
1515 South 4th Street, Oak Brook, IL 60523, P 630.218.8000
State of Illinois Design Firm Registration No. 184.000499

GRANT A. SHAMBAUGH, 001-020648, REGISTERED ARCHITECT, EXP: 11 - 30 - 2022

THE MISSNER GROUP

MISSNER GROUP - PALATINE
2250 NORTH RAND ROAD
PALATINE, ILLINOIS 60074

DETAILS

| DATE | REMARKS |
|---|---|
| 08/04/22 | PROGRESS PACKAGE |
| 09/23/22 | PERMIT SET |

PM/PM: M. PULA
DRAWN BY: S.R.
JOB NO.: CH21-0193

SHEET
A8.3

Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)

# FINAL SITE IMPROVEMENT PLANS
for
# 2240-2296 RAND ROAD

## VILLAGE OF PALATINE
## COOK COUNTY, ILLINOIS
## PROJECT NO: 11624

**DEVELOPER**
2234-2296 RAND RD TMG, LLC
c/o THE MISSNER GROUP
1700 WEST HIGGINS ROAD, SUITE 400
DES PLAINES, IL 60018
PH: (847) 947-5333

**ARCHITECT**
WARE MALCOMB
1315 22nd STREET, SUITE #410
OAK BROOK, IL 60523
PH: (630) 218-0063

**CALL J.U.L.I.E. 1-800-892-0123**
**WITH THE FOLLOWING:**
COUNTY: COOK COUNTY
CITY, TOWNSHIP: VILLAGE OF PALATINE, PALATINE
SEC. & ¼ SEC. NO.: NW 1/4 S2, T42N, R10E
**48 HOURS BEFORE YOU DIG.**
**EXCLUDING SAT., SUN. & HOLIDAYS**

**BENCHMARK**
ELEVATION:
DESCRIPTION: SEE SHEET ET FOR BENCHMARK INFORMATION

**NOTE:**
SPACECO, INC. IS TO BE NOTIFIED AT LEAST THREE (3) DAYS PRIOR TO STARTING CONSTRUCTION AND SHALL BE INCLUDED IN THE PRECONSTRUCTION MEETINGS

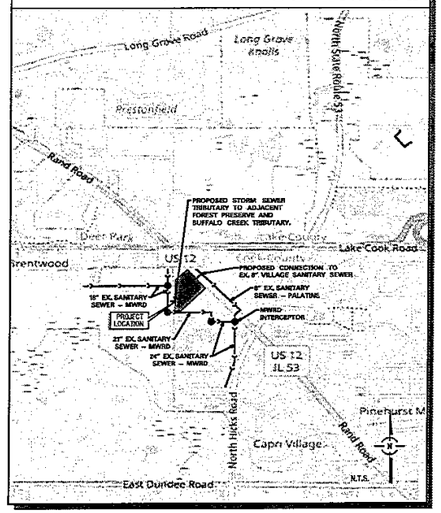
## REVISIONS
ORIGINAL PLAN DATE: MARCH 16, 2022

| # | SHEET # | REMARKS | DATE |
|---|---|---|---|
| 1 | ALL | REVISIONS PER ARCHITECT | 03/22/22 |
| 2 | ALL | REVISIONS PER ARCHITECT/OWNER | 04/11/22 |

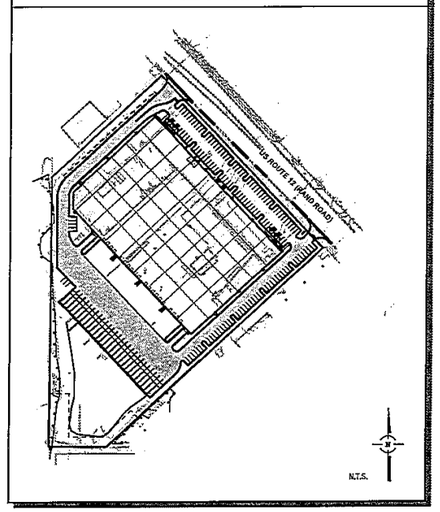
## INDEX


| SHEET # | SHEET I.D. | SHEET DESCRIPTION |
|---|---|---|
| 1 | C1 | COVER SHEET |
| 2 | GN | TYPICAL SECTIONS & GENERAL NOTES |
| 3 | ET | EXISTING CONDITIONS PLAN |
| 4 | DEMO | DEMOLITION PLAN |
| 5 | GM | GEOMETRIC PLAN |
| 6 | GR | GRADING PLAN |
| 7 | UT | UTILITY PLAN |
| 8 | PP01 | PLAN AND PROFILE - SANITARY SEWER SERVICE |
| 9-11 | SE1-SE3 | SOIL EROSION AND SEDIMENT CONTROL SPECIFICATIONS AND DETAILS |
| 12-13 | SP1-2 | SPECIFICATIONS |
| 14-17 | D1-D4 | DETAILS |
| 18 | EX01-R | MWRD EXHIBIT R |


## SANITARY SEWER ROUTING MAP




## KEY MAP




04/11/22
ENGINEER DATE
BRETT M. DUFFY, P.E.
ILLINOIS REGISTRATION NO.: 062-053198
EXPIRATION DATE: 11/30/2023
PROFESSIONAL DESIGN FIRM NO.: 184-001157
EXPIRATION DATE: 04/30/2023
THESE PLANS OR ANY PART THEREOF SHALL BE CONSIDERED VOID WITHOUT THE SIGNATURE, SEAL, AND EXPIRATION DATE OF SEAL OF THE ENGINEER

2240-2296 RAND ROAD
VILLAGE OF PALATINE
COOK COUNTY, ILLINOIS


9575 W. Higgins Road, Suite 700, Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065


CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

SPACECO INC.

FILENAME: 11624TITLE
DATE: 03/16/2022
JOB NO. 11624
SHEET C1
1 OF 18

Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)

## GENERAL NOTES

1. REFERENCED CODES

A. ALL PAVEMENT AND STORM SEWER CONSTRUCTION SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (SSRBC), AND SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS ADOPTED APRIL 1, 2016 BY ILLINOIS DEPARTMENT OF TRANSPORTATION AND ALL AMENDMENTS THERETO; AND IN ACCORDANCE WITH THE LATEST EDITION OF THE CODE OF THE MUNICIPALITY; EXCEPT AS MODIFIED HEREIN, IN CASE OF CONFLICT, MUNICIPAL CODE SHALL TAKE PRECEDENCE.

B. ALL SANITARY SEWER AND WATERMAIN CONSTRUCTION SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS, PUBLISHED JANUARY 2016 AND IN ACCORDANCE WITH THE CODE OF THE MUNICIPALITY; EXCEPT AS MODIFIED HEREIN OR BY ANY PUBLIC AGENCY PERMITS ISSUED FOR THIS WORK. IN CASE OF CONFLICT, THE MORE RESTRICTIVE PROVISIONS SHALL APPLY.

C. ALL SIDEWALK AND PUBLIC AREAS MUST BE CONSTRUCTED IN ACCORDANCE WITH CURRENT ADA, ILLINOIS ACCESSIBILITY CODE AND ANY APPLICABLE LOCAL ORDINANCES. WHEN CONFLICTS EXIST BETWEEN THE GOVERNING AGENCIES, THE MORE STRINGENT SHALL CONCUR.

D. THE CITED STANDARD SPECIFICATIONS, CODES AND PERMITS, WITH THESE CONSTRUCTION PLANS AND DETAILS, ARE ALL TO BE CONSIDERED PART OF THIS CONTRACT. INCIDENTAL ITEMS OR ACCESSORIES NECESSARY TO COMPLETE THIS WORK MAY NOT BE SPECIFICALLY NOTED BUT ARE CONSIDERED A PART OF THIS CONTRACT.

2. UTILITY LOCATIONS

A. THE UTILITY COMPANIES HAVE BEEN CONTACTED AS REFERENCE TO UTILITIES THEY OWN AND OPERATE WITHIN THE LIMITS OF THIS PROJECT. DATA FROM THESE AGENCIES HAS BEEN INCORPORATED INTO THE PLANS. IT IS, HOWEVER, THE CONTRACTORS RESPONSIBILITY TO CONFIRM OR ESTABLISH THE EXISTENCE OF ALL UTILITY FACILITIES AND THEIR EXACT LOCATIONS, AND TO SATISFY SCHEDULE ALL UTILITY RELOCATIONS. FOR ADDITIONAL INFORMATION, THE AGENCIES LISTED ON THIS SHEET MAY BE CONTACTED.

B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING THE UTILITY COMPANIES LOCATE THEIR FACILITIES IN THE FIELD PRIOR TO CONSTRUCTION AND SHALL ALSO BE RESPONSIBLE FOR THE MAINTENANCE AND PRESERVATION OF THESE FACILITIES. THE ENGINEER DOES NOT WARRANT THE LOCATION OF ANY EXISTING UTILITIES SHOWN ON THE PLAN. THE CONTRACTOR SHALL CALL J.U.L.I.E. AT 800-892-0123 AND THE MUNICIPALITY FOR UTILITY LOCATIONS. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES AND THE MUNICIPALITY TWENTY-FOUR (24) HOURS PRIOR TO STARTING ANY CONSTRUCTION.

C. EASEMENTS FOR THE EXISTING UTILITIES, BOTH PUBLIC AND PRIVATE, AND UTILITIES WITHIN PUBLIC RIGHTS-OF-WAY ARE SHOWN ON THE PLANS ACCORDING TO AVAILABLE RECORDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION IN THE FIELD OF THESE UTILITY LINES AND THEIR PROTECTION FROM DAMAGE DUE TO CONSTRUCTION OPERATIONS. IF EXISTING UTILITY LINES OF ANY NATURE ARE ENCOUNTERED WHICH CONFLICT WITH LOCATIONS OF THE NEW CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER SO THAT THE CONFLICT MAY BE RESOLVED.

3. UTILITY COORDINATION

A. OWNER SHALL OBTAIN EASEMENTS AND PERMITS NECESSARY TO FACILITATE CONSTRUCTION OF THE PROPOSED UTILITIES. THE CONTRACTOR, HOWEVER, SHALL FURNISH ALL REQUIRED BONDS AND EVIDENCE OF INSURANCE NECESSARY TO SECURE THESE PERMITS.

B. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE NATURE AND STATUS OF ALL UTILITY RELOCATION WORK PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL TAKE APPROPRIATE MEASURES TO ENSURE THAT CONSTRUCTION OPERATIONS DO NOT INTERFERE WITH UTILITY FACILITIES AND RELOCATION WORK. THE SCHEDULE SHOULD REFLECT CONSTRUCTION SEQUENCING WHICH COORDINATES WITH ALL UTILITY RELOCATION WORK. THE CONTRACTOR SHALL BE REQUIRED TO ADJUST THE ORDER OF ITS WORK FROM TIME TO TIME, TO COORDINATE SAME WITH UTILITY RELOCATION WORK, AND SHALL PREPARE REVISED SCHEDULES IN CONFORMANCE THEREWITH AS DIRECTED BY THE OWNER.

C. THE OWNER AND THE ENGINEER SHALL BE NOTIFIED IN WRITING BY THE CONTRACTOR AT LEAST 48 HOURS PRIOR TO THE START OF ANY OPERATION INCLUDING COORDINATION WITH OTHERS. AT LEAST BE CONTACTED ONE MONTH PRIOR TO START OF CONSTRUCTION IN ITS UTILITY AREAS. ALL OTHER AGENCIES, UNLESS OTHERWISE NOTED, SHALL BE NOTIFIED IN WRITING BY THE CONTRACTOR TEN (10) DAYS PRIOR TO THE START OF ANY SUCH OPERATION.

4. NO PLAN SHALL BE USED FOR CONSTRUCTION UNLESS SPECIFICALLY MARKED "FOR CONSTRUCTION". PRIOR TO COMMENCEMENT OF CONSTRUCTION THIS CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AFFECTING THE WORK WITH THE ACTUAL CONDITIONS AT THE JOB SITE. IN ADDITION, THE CONTRACTOR SHALL VERIFY THE ENGINEER'S LINE AND GRADE STAKES. IF THERE ARE ANY DISCREPANCIES WITH WHAT IS SHOWN ON THE CONSTRUCTION PLANS, HE MUST IMMEDIATELY REPORT SAME TO ENGINEER BEFORE DOING ANY WORK, OTHERWISE THE CONTRACTOR ASSUMES FULL RESPONSIBILITY. IN THE EVENT OF DISAGREEMENT BETWEEN THE CONSTRUCTION PLANS, SPECIFICATIONS AND/OR SPECIAL DETAILS, THE CONTRACTOR SHALL SECURE WRITTEN INSTRUCTION FROM THE ENGINEER PRIOR TO PROCEEDING WITH ANY PART OF THE WORK AFFECTED BY OMISSIONS OR DISCREPANCIES. FAILING TO SECURE SUCH INSTRUCTION, THE CONTRACTOR WILL BE CONSIDERED TO HAVE PROCEEDED AT HIS OWN RISK AND EXPENSE, IN THE EVENT OF ANY DOUBT OR QUESTIONS ARISING WITH RESPECT TO THE TRUE MEANING OF THE CONSTRUCTION PLANS OR SPECIFICATIONS, THE DECISION OF THE ENGINEER SHALL BE FINAL AND CONCLUSIVE.

5. ALL PROPOSED ELEVATIONS SHOWN ON THE PLANS ARE FINISHED SURFACE ELEVATIONS, UNLESS OTHERWISE SPECIFIED.

6. UPON AWARDING OF THE CONTRACT, AND WHEN REQUIRED BY THE MUNICIPALITY OR OWNER, THE CONTRACTOR SHALL FURNISH A LABOR, MATERIAL AND PERFORMANCE BOND IN THE AMOUNT REQUIRED GUARANTEEING COMPLETION OF THE WORK. THE UNDERWRITER SHALL BE ACCEPTABLE TO THE MUNICIPALITY OR OWNER, AS APPROPRIATE.

7. THE CONTRACTORS SHALL PLAN THEIR WORK BASED ON THEIR OWN BORINGS, EXPLORATIONS AND OBSERVATIONS TO DETERMINE SOIL CONDITIONS AT THE LOCATION OF THE PROPOSED WORK. HOWEVER, IF THE OWNER HAS A SOILS REPORT, THE RESULTS WILL BE AVAILABLE FROM THE OWNER UPON WRITTEN REQUEST.

8. CONTRACTOR SHALL VIDEO TAPE WORK AREA PRIOR TO CONSTRUCTION FOR THE PURPOSE OF DOCUMENTING EXISTING CONDITIONS.

9. COMMENCING CONSTRUCTION

A. THE CONTRACTOR SHALL NOTIFY THE OWNER AND/OR HIS REPRESENTATIVE AND THE AFFECTED GOVERNMENTAL AGENCIES IN WRITING AT LEAST THREE FULL WORKING DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION. IN ADDITION, THE CONTRACTOR SHALL NOTIFY AS NECESSARY, ALL TESTING AGENCIES, OTHER MUNICIPALITIES OR THE OWNER'S, SUFFICIENTLY IN ADVANCE OF CONSTRUCTIONS, ALL MATERIAL TESTING SHALL BE THE RESPONSIBILITY AND EXPENSE OF THE CONTRACTOR. THE TESTING AGENCY SHALL MEET THE APPROVAL OF THE OWNER.

B. FAILURE OF CONTRACTOR TO ALLOW PROPER NOTIFICATION TIME WHICH RESULTS IN TESTING COMPANIES TO BE UNABLE TO VISIT SITE AND PERFORM TESTING WILL CAUSE CONTRACTOR TO SUSPEND OPERATION UNTERTAKING TO TESTING UNTIL TESTING AGENCY CAN SCHEDULE TESTING OPERATIONS. COST OF SUSPENSION OF WORK TO BE BORNE BY CONTRACTOR.

10. ALL CONTRACTORS SHALL KEEP ACCESS AVAILABLE AT ALL TIMES FOR ALL TYPES OF TRAFFIC. AT NO TIME SHALL ACCESS BE DENIED TO ADJACENT PROPERTIES.

11. THE CONTRACTOR SHALL PRESERVE ALL CONSTRUCTION STAKES UNTIL THEY ARE NO LONGER NEEDED. ANY STAKES DESTROYED OR DISTURBED BY THE CONTRACTOR PRIOR TO THEIR USE SHALL BE RESET BY THE DEVELOPERS ENGINEER AT CONTRACTOR'S COST.

12. ANY EXISTING SIGNS, LIGHT STANDARDS AND UTILITY POLES WHICH INTERFERE WITH CONSTRUCTION OPERATIONS AND NOT NOTED FOR DISPOSAL SHALL BE REMOVED AND RESET BY THE CONTRACTOR AT HIS OWN EXPENSE AS SHOWN ON THE ENGINEERING PLANS OR AS DIRECTED BY THE DEVELOPER. ANY DAMAGE TO THESE ITEMS SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT HIS OWN EXPENSE, TO THE SATISFACTION OF THE OWNER. ANY SIGNS NOT REQUIRED TO BE RESET, SHALL BE DELIVERED TO THE RESPECTIVE OWNERS.

13. REMOVAL OF SPECIFIED ITEMS, INCLUDING BUT NOT LIMITED TO, PAVEMENT, SIDEWALK, CURB, CURB AND GUTTER, CULVERTS, ETC. SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR AT HIS OWN EXPENSE. HE IS RESPONSIBLE FOR ANY PERMIT REQUIRED FOR SUCH DISPOSAL.

14. ALL FIELD TILE ENCOUNTERED DURING CONSTRUCTION OPERATIONS SHALL BE CONNECTED TO THE PROPOSED STORM SEWER SYSTEM OR SHALL BE RESTORED TO PROPER OPERATING CONDITION. A RECORD OF THE LOCATION OF ALL FIELD TILE OR DRAIN PIPE ENCOUNTERED SHALL BE KEPT BY THE CONTRACTOR AND TURNED OVER TO THE ENGINEER, DEVELOPER OR MUNICIPAL ENGINEER UPON COMPLETION OF THE PROJECT. THE COST OF THIS WORK SHALL BE CONSIDERED AS INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

15. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR SAFETY ON THE JOB.

16. THE CONTRACTOR SHALL COLLECT AND REMOVE ALL CONSTRUCTION DEBRIS, EXCESS MATERIALS, TRASH, OIL AND GREASE RESIDUE, MACHINERY, TOOLS AND OTHER MISCELLANEOUS ITEMS WHICH WERE NOT PRESENT PRIOR TO PROJECT COMMENCEMENT AT NO ADDITIONAL EXPENSE TO THE OWNER'S. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ANY AND ALL PERMITS NECESSARY FOR THE HAULING AND DISPOSAL REQUIRED FOR CLEAN-UP AS DIRECTED BY THE ENGINEER OR OWNER. BURNING ON THE SITE IS NOT PERMITTED.

17. ALL EXISTING UTILITIES OR IMPROVEMENTS, INCLUDING WALKS, CURBS, PAVEMENT AND PAVEWAYS DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE PROMPTLY RESTORED TO THEIR RESPECTIVE ORIGINAL CONDITION. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT UNLESS SPECIFICALLY NOTED ON THE PLANS.

18. TREES NOT MARKED FOR REMOVAL SHALL BE CONSIDERED AS DESIGNATED TO BE SAVED AND SHALL BE PROTECTED UNDER THE PROVISIONS OF (SSRBC) ARTICLE 201.05.

19. LIMB PRUNING SHALL BE PERFORMED UNDER THE SUPERVISION OF THE LANDSCAPE ARCHITECT MEETING THE OWNER'S APPROVAL AND SHALL BE ENCOMPASSED IN A TIMELY FASHION SO AS NOT TO INTERFERE WITH CONSTRUCTION.

20. ALL LIMBS, BRANCHES, AND OTHER DEBRIS RESULTING FROM THIS WORK SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR AT HIS OWN EXPENSE OFF-SITE.

21. ALL CUTS OVER 1" IN DIAMETER SHALL BE MADE FLUSH WITH THE NEXT LARGE BRANCH. WOUNDS OVER 1" IN DIAMETER SHALL BE PAINTED WITH AN APPROVED TREE PAINT.

22. GENERAL EXCAVATION/UNDERGROUND NOTES

A. SLOPE SIDES OF EXCAVATIONS TO COMPLY WITH CODES AND ORDINANCES HAVING JURISDICTION. SHORE AND BRACE WHERE SLOPING IS NOT POSSIBLE EITHER BECAUSE OF SPACE RESTRICTIONS OR STABILITY OF MATERIAL EXCAVATED. MAINTAIN SIDES AND SLOPES OF EXCAVATIONS IN A SAFE CONDITION UNTIL COMPLETION OF BACKFILLING.

B. PROVIDE MATERIALS FOR SHORING AND BRACING, SUCH AS SHEET PILING, UPRIGHTS, STRINGERS AND CROSS BRACES, IN GOOD SERVICEABLE CONDITION. PROVIDE MINIMUM REQUIREMENTS FOR TRENCH SHORING AND BRACING TO COMPLY WITH CODES AND AUTHORITIES HAVING JURISDICTION. MAINTAIN SHORING AND BRACING IN EXCAVATIONS REGARDLESS OF TIME PERIOD EXCAVATIONS WILL BE OPEN. CARRY DOWN SHORING AND BRACING AS EXCAVATION PROGRESSES IN ACCORDANCE WITH OSHA AND CONFINING AUTHORITY.

C. PREVENT SURFACE WATER AND SUBSURFACE OR GROUNDWATER FROM FLOWING INTO EXCAVATIONS. REMOVE WATER TO PREVENT SOFTENING OF FOUNDATION BOTTOMS, UNDERCUTTING FOOTINGS, AND SOIL CHANGES DETRIMENTAL TO STABILITY OF SUBGRADES AND FOUNDATIONS. PROVIDE AND MAINTAIN PUMPS, SUMPS, SUCTION AND DISCHARGE LINES AND OTHER DEWATERING SYSTEM COMPONENTS NECESSARY TO CONVEY WATER AWAY FROM EXCAVATIONS. CONVEY WATER REMOVED FROM EXCAVATIONS AND TRENCHES TO COLLECTING OR RUN-OFF AREAS ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION. PROVIDE AND MAINTAIN TEMPORARY DRAINAGE DITCHES AND OTHER DIVERSIONS OUTSIDE EXCAVATION LIMITS FOR EACH STRUCTURE, DO NOT USE TRENCH EXCAVATIONS AS TEMPORARY DRAINAGE DITCHES.

D. IMMEDIATELY REPORT CONDITIONS THAT MAY CAUSE UNSOUND BEARING TO THE OWNER/DEVELOPER BEFORE CONTINUING WORK.

23. FINAL ACCEPTANCE

A. ALL WORK PERFORMED UNDER THIS CONTRACT SHALL BE GUARANTEED BY THE CONTRACTOR AND HIS SURETY FOR A PERIOD OF TWELVE (12) MONTHS FROM THE DATE OF FINAL ACCEPTANCE OF THE PROJECT AND THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL DEFECTS IN MATERIALS AND WORKMANSHIP OF WHATEVER NATURE DURING THAT PERIOD. THIS GUARANTEE SHALL BE PROVIDED IN THE FORM OF MAINTENANCE BOND IN THE AMOUNT OF 10% OF THE COST OF IMPROVEMENTS.

B. BEFORE ACCEPTANCE BY THE OWNER AND FINAL PAYMENT, ALL WORK SHALL BE INSPECTED BY THE OWNER OR HIS REPRESENTATIVE. FINAL PAYMENT WILL BE MADE AFTER ALL THE CONTRACTORS WORK HAS BEEN APPROVED AND ACCEPTED.

C. NO UNDERGROUND WORK SHALL BE COVERED UNTIL IT HAS BEEN APPROVED BY THE MUNICIPALITY. APPROVAL TO PROCEED SHALL BE OBTAINED FROM THE MUNICIPALITY PRIOR TO INSTALLING PAVEMENT BASE, BINDER, SURFACE, AND PRIOR TO PLACING ANY CONCRETE AS FORMS HAVE BEEN SET.

D. AT THE CLOSE OF EACH WORKING DAY AND AT THE CONCLUSION OF CONSTRUCTION OPERATIONS, ALL DRAINAGE STRUCTURES AND FLOW LINES SHALL BE FREE FROM DIRT AND DEBRIS.

24. UNDERGROUND NOTES

A. UNDERGROUND WORK SHALL INCLUDE TRENCHING, INSTALLATION OF PIPE, CASTINGS, STRUCTURES, BACKFILLING OF TRENCHES AND COMPACTION AND TESTING AS SHOWN ON THE CONSTRUCTION PLANS. FITTINGS AND ACCESSORIES NECESSARY TO COMPLETE THE WORK MAY NOT BE SPECIFIED, BUT SHALL BE CONSIDERED AS INCIDENTAL TO THE COST OF THE CONTRACT.

B. WHERE SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER, EXISTING DRAINAGE STRUCTURES AND SYSTEMS SHALL BE CLEANED OF DEBRIS AND PATENTED AS NECESSARY TO ASSURE INTEGRITY OF THE STRUCTURE. THIS WORK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR STRUCTURES AND CONTRACT UNIT PRICE PER LINEAL FOOT FOR SYSTEMS WHICH SHALL BE PAYMENT IN FULL FOR CLEANING, PATCHING, REMOVAL AND DISPOSAL OF DEBRIS AND DIRT. DRAINAGE STRUCTURES AND SYSTEMS CONSTRUCTED AS PART OF THIS PROJECT SHALL BE MAINTAINED BY THE CONTRACTOR AS HIS EXPENSE. NO PAYMENT WILL BE MADE FOR CLEANING STRUCTURES OR SYSTEMS CONSTRUCTED AS PART OF THIS PROJECT.

C. ANY DEWATERING OF SEWER AND WATER TRENCHES AS WELL AS TEMPORARY SHEETING OR BRACING THAT MAY BE REQUIRED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL NOT BE CONSIDERED EXTRA WORK UNLESS THERE IS A SPECIFIC LINE ITEM FOR DEWATERING. IN THE EVENT THAT SOFT MATERIALS WITH INSUFFICIENT COMPRESSIVE STRENGTH LESS THAN 1.0 TSF ARE ENCOUNTERED IN SEWER CONSTRUCTION, THE CONTRACTOR SHALL UPON APPROVAL OF THE OWNER AND/OR ENGINEER) OVER-EXCAVATE TO A DEPTH OF ONE (1) FOOT BELOW THE BOTTOM OF THE PIPE AND BACKFILL WITH COMPACTED CRUSHED STONE, PROPERLY TAMPED TO FIT THE BOTTOM OF THE PIPE.

D. TRENCH BACKFILL WILL BE REQUIRED FOR THE FULL TRENCH DEPTH WITHIN TWO (2) FEET OF PROPOSED OR EXISTING PAVEMENTS, SIDEWALKS, DRIVEWAYS, AND SEWALKS AND EXTENDING A DISTANCE EQUAL TO A 1:1 SLOPE FROM SUBGRADE ELEVATION TO TOP OF PIPE. THE TRENCH BACKFILL SHALL CONSIST OF GRANULAR MATERIAL MEETING IDOT CA-6 GRADATION. THE TRENCH BACKFILL SHALL BE COMPACTED IN ACCORDANCE WITH (SSRBC) SPECIFICATIONS. JETTING WITH WATER SHALL NOT BE PERMITTED. THE COST OF SUCH CONSTRUCTION SHALL BE CONSIDERED INCIDENTAL TO THIS CONTRACT AND SHALL BE INCLUDED IN THE UNIT PRICE OF THE PIPE. NO SEPARATE PAYMENT SHALL BE MADE FOR THIS ITEM.

E. THE CONTRACTOR SHALL INSTALL A 4"X 4"X 8' P (NOMINAL) POST AT THE TERMINUS OF THE SANITARY, WATER AND STORM SEWERS. SANITARY AND STORM MANHOLES, CATCH BASINS, INLETS AND WATER VAULTS. THE POST SHALL EXTEND 4' ABOVE THE GROUND. THE TOP 12" OF SAID POST SHALL BE PAINTED AS FOLLOWS: SANITARY - RED, WATERMAIN - BLUE, STORM - GREEN.

F. AFTER THE STORM SEWER SYSTEM HAS BEEN CONSTRUCTED, THE CONTRACTOR SHALL PLACE EROSION CONTROL AT REAR YARD INLET LOCATIONS, AND AT OTHER LOCATIONS SELECTED BY THE ENGINEER, TO MINIMIZE THE AMOUNT OF SILTATION WHICH NORMALLY WOULD ENTER THE STORM SEWER SYSTEM.

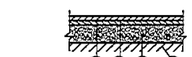
G. HYDRANTS SHALL NOT BE FLUSHED DIRECTLY ON THE ROAD SUBGRADES. WHENEVER POSSIBLE, HOSES SHALL BE USED TO DIRECT THE WATER INTO LOT AREAS OR THE STORM SEWER SYSTEM (IF AVAILABLE). DAMAGE TO THE ROAD SUBGRADE OR LOT GRADING DUE TO EXCESSIVE WATER SATURATION AND/OR EROSION FROM HYDRANT FLUSHING, OR FROM LEAKS IN THE WATER DISTRIBUTION SYSTEM, WILL BE REPAIRED BY THE CONTRACTOR AT HIS COST.

H. ALL TOP OF FRAMES FOR STORM AND SANITARY SEWERS AND VALVE VAULT COVERS ARE TO BE ADJUSTED TO MEET FINAL FINISH GRADE. THIS ADJUSTMENT IS TO BE MADE BY THE SEWER AND WATER CONTRACTOR AND THE COST IS TO BE CONSIDERED INCIDENTAL. THESE ADJUSTMENTS TO FINISHED GRADE WILL NOT ALLEVIATE THE CONTRACTOR FROM ANY ADDITIONAL ADJUSTMENTS AS REQUIRED BY THE MUNICIPALITY UPON FINAL INSPECTION OF THE PROJECT. (FINAL GRADES TO BE DETERMINED BY THE MUNICIPALITY AT THE TIME OF FINAL INSPECTION AND MAY VARY FROM PLAN GRADE.)

I. SLEEVES FOR UTILITY (CONED, TELEPHONE, ETC.) STREET CROSSING, SHALL BE INSTALLED WHERE DIRECTED BY THE OWNER'S. SLEEVES SHALL BE 4" PVC INSTALLED 30" BELOW THE TOP OF CURB AND EXTEND TWO FEET OUTSIDE THE CURB. TRENCH SHALL BE BACKFILLED WITH COMPACTED GRANULAR MATERIAL.

J. THE CONTRACTOR SHALL VERIFY THE SIZE AND INVERT ELEVATION OF ALL CONNECTIONS TO AVOID ANY CONFLICTS BEFORE STAKING WORK. NOTIFY OWNER OF ANY DISCREPANCIES.

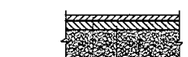
25. IT SHALL BE UNDERSTOOD THAT NEITHER THE MUNICIPALITY, ITS OFFICIALS, CONSULTANTS, NOR ITS EMPLOYEES AND AGENTS OF OR REPRESENTATIVES OF THE OWNER, NOW-OR-HEREAFTER, THE MUNICIPALITY, ITS OFFICIALS AND EMPLOYEES ARE TO BE PROVIDED SAFE ACCESS TO ALL PHASES OF ALL WORK PERFORMED ON THE PROJECT SITE TO MONITOR THE QUALITY OF THE WORK AND ASSURE ITS CONFORMITY WITH THE PLANS AND SPECIFICATIONS. THERE SHALL BE NO PERSONAL LIABILITY UPON ANY OFFICIAL OR EMPLOYEE OF THE MUNICIPALITY ON ACCOUNT OF ACTIONS TAKEN OR NOT TAKEN IN THE COURSE OF THEIR WORK. THE CONTRACTOR MUST AT ALL TIMES MAINTAIN A SAFE ACCESS TO THE WORK FOR INSPECTIONS. "SAFE" MEANING CONDITIONS COMPLYING WITH ALL PROVISIONS OF ALL APPLICABLE AND RECOGNIZED SAFETY STANDARDS, FEDERAL, STATE AND LOCAL. IF ACCESS IS NOT SAFE AND INSPECTIONS CANNOT BE MADE UNDER SAFE CONDITIONS, THE INSPECTION CAN ENDURE CESSATION OF THE WORK SO AFFECTED UNTIL SUCH TIME AS CONTRACTOR PROVIDES SAFE ACCESS.



TYPICAL ASPHALT PAVEMENT SECTION
(STANDARD DUTY - PASSENGER VEHICLE PARKING AREAS)
N.T.S.

1. 1.5" HMA SURFACE COURSE, MIX "C", N50
2. 2.25" HMA BINDER COURSE, IL 19.0, N50
3. 10" AGGREGATE BASE COURSE, TYPE B
4. COMPACTED AND STABLE SUBGRADE

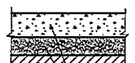
STRUCTURAL #:
1.5 X 0.40 = 0.60
2.25X 0.33 = 0.74
10.0 X 0.13 = 1.30
= 2.64



TYPICAL ASPHALT PAVEMENT SECTION
(HEAVY DUTY - TRUCK AREAS)
N.T.S.

1. 2.5" HMA SURFACE COURSE, MIX "C", N50
2. 4" HMA BINDER COURSE, IL 19.0, N50
3. 12" AGGREGATE BASE COURSE, TYPE B
4. COMPACTED AND STABLE SUBGRADE

STRUCTURAL #:
2.0 X 0.40 = 0.80
4.0 X 0.33 = 1.32
12 X 0.13 = 1.56
= 3.68

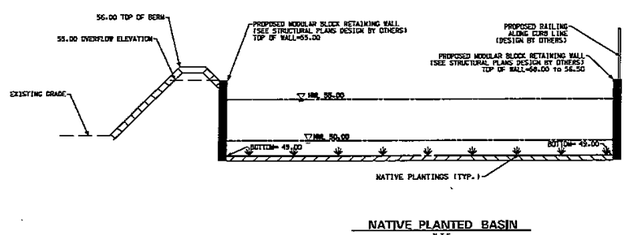


TYPICAL CONCRETE PAVEMENT SECTION
LOADING DOCK
N.T.S.

- 8" PORTLAND CEMENT CONCRETE
- 8" AGGREGATE BASE COURSE, TYPE B
- COMPACTED AND STABLE SUBGRADE

TYPICAL SIDEWALK/PEDESTRIAN PATH SECTION
N.T.S.

- 5" PORTLAND CEMENT CONCRETE
- 4" AGGREGATE BASE COURSE, TYPE B
- COMPACTED AND STABLE SUBGRADE




NATIVE PLANTED BASIN
N.T.S.

## LEGEND

| EXISTING | DESCRIPTION | PROPOSED |
|---|---|---|
| | DRAIN TILE | |
| | STORM SEWER | |
| | SANITARY SEWER | |
| | SANITARY TRUNK SEWER | |
| 8" | WATER MAIN (WITH SIZE) | 8" |
| | PIPE TRENCH BACKFILL | |
| | GAS MAIN | |
| | TELEPHONE LINES | |
| | ELECTRIC LINE | |
| | FENCE | |
| | RIGHT-OF-WAY | |
| | EASEMENT | |
| | PROPERTY LINE | |
| | SETBACK LINE | |
| | CENTERLINE | |
| 680 | CONTOUR | 680 |
| | SANITARY MANHOLE | |
| | STORM MANHOLE | |
| | CATCH BASIN | |
| | INLET | |
| | FIRE HYDRANT | |
| | PRESSURE CONNECTION | |
| | PIPE REDUCER | |
| | VALVE AND VAULT, VALVE | |
| | FLARED END SECTION | |
| | STREET LIGHT | |
| | UTILITY POLE | |
| | CONTROL POINT | |
| | SIGN | |
| XXXX.XX | SPOT ELEVATION | XXX.XX |
| | SOIL BORING | |
| | OVERLAND FLOW ROUTE | |
| | DRAINAGE SLOPE | OR |
| | GUARDRAIL | |
| | WATER'S EDGE | |
| | CONCRETE | |
| | REVERSE PITCH CURB | |
| | TREE, FIR TREE, BUSH, & PROPOSED TREE TO REMOVE | |

### ABBREVIATIONS

| | | |
|---|---|---|
| M = STORM MANHOLE | I = INVERT OR INLET | T/P = TOP OF PIPE |
| S = SANITARY MANHOLE | TF = TOP OF FOUNDATION | B/P = BOTTOM OF PIPE |
| CB = CATCH BASIN | GF = GARAGE FLOOR | WM = WATERMAIN |
| LP = LIGHT POLE | TC = TOP OF CURB | SAN = SANITARY SEWER |
| VV = VALVE VAULT | TD = TOP OF DEPRESSED CURB | STM = STORM SEWER |
| E = END SECTION | TW = TOP OF RETAINING WALL | LO = LOOK OUT |
| FH = FIRE HYDRANT | BW = BOTTOM OF RETAINING WALL | PLO = PARTIAL LOOK OUT |
| GR = GRADE RING (HYDRANT) | OP = OUTLET OF PIPE | |

### PERMITS

| DESCRIPTION | LOG NO. | PERMIT NO. | DATE ISSUED |
|---|---|---|---|
| IDNR EDOCAT | 2202531 | 2202531 | 08/13/2021 |
| IDNR SHPO | 0307030422 | | |
| IEPA NPDES | | | |
| USACE | | | |
| IDOT | | | |
| IEPA DWPC (SANITARY) | | | |
| IEPA DPWS (WATER) | | | |
| | | | |

BENCHMARK
SEE SHEET ET FOR BENCHMARK INFORMATION.

### CONTACT INFORMATION

VILLAGE OF PALATINE
200 EAST WOOD STREET
PALATINE, IL 60067
(847) 358-7500

AT&T
688 INDUSTRIAL DRIVE
ELMHURST, IL 60126
(630) 600-6347

COMMONWEALTH EDISON
201 W. ARTHUR AVE.
MT. PROSPECT, IL 60056
(847) 870-4724

NICOR GAS
1211 WILEY ROAD
SCHAUMBURG, IL 60195
(847) 843-3827

| NO. | DATE | REMARKS |
|---|---|---|
| 2 | 04/11/22 | REVISIONS PER ARCHITECT/OWNER |
| 1 | 03/02/22 | REVISIONS PER ARCHITECT |
| NO. | DATE | REMARKS |

TYPICAL SECTIONS & GENERAL NOTES

2240-2296 RAND ROAD
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE/DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700
Rosemont, Illinois 60018
Phone: (847) 696-4996 Fax: (847) 696-4995

SPACECO INC.

FILENAME: 11624GN
DATE: 03/16/22
JOB NO. 11624
SHEET GN
2 OF 18

Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)

| NO. | DATE | REMARKS |
|---|---|---|
| 2 | 04/11/22 | REVISIONS PER ARCHITECT/OWNER |
| 1 | 03/22/22 | REVISIONS PER ARCHITECT |

EXISTING CONDITIONS PLAN

2240-2296 RAND ROAD
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
5979 W. Higgins Road, Suite 205
Chicago, IL 60630
Phone: (847) 696-4000 Fax: (847) 696-4005
SPACECO INC.

FILENAME: 11624ET
DATE: 03/16/22
JOB NO. 11624
SHEET ET
3 OF 18

Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)

| NO. | DATE | REMARKS |
|---|---|---|
| 2 | 6/17/22 | REVISIONS PER ARCHITECT/OWNER |
| 1 | 5/2/2022 | REVISIONS PER ARCHITECT |
| NO. | DATE | REMARKS |

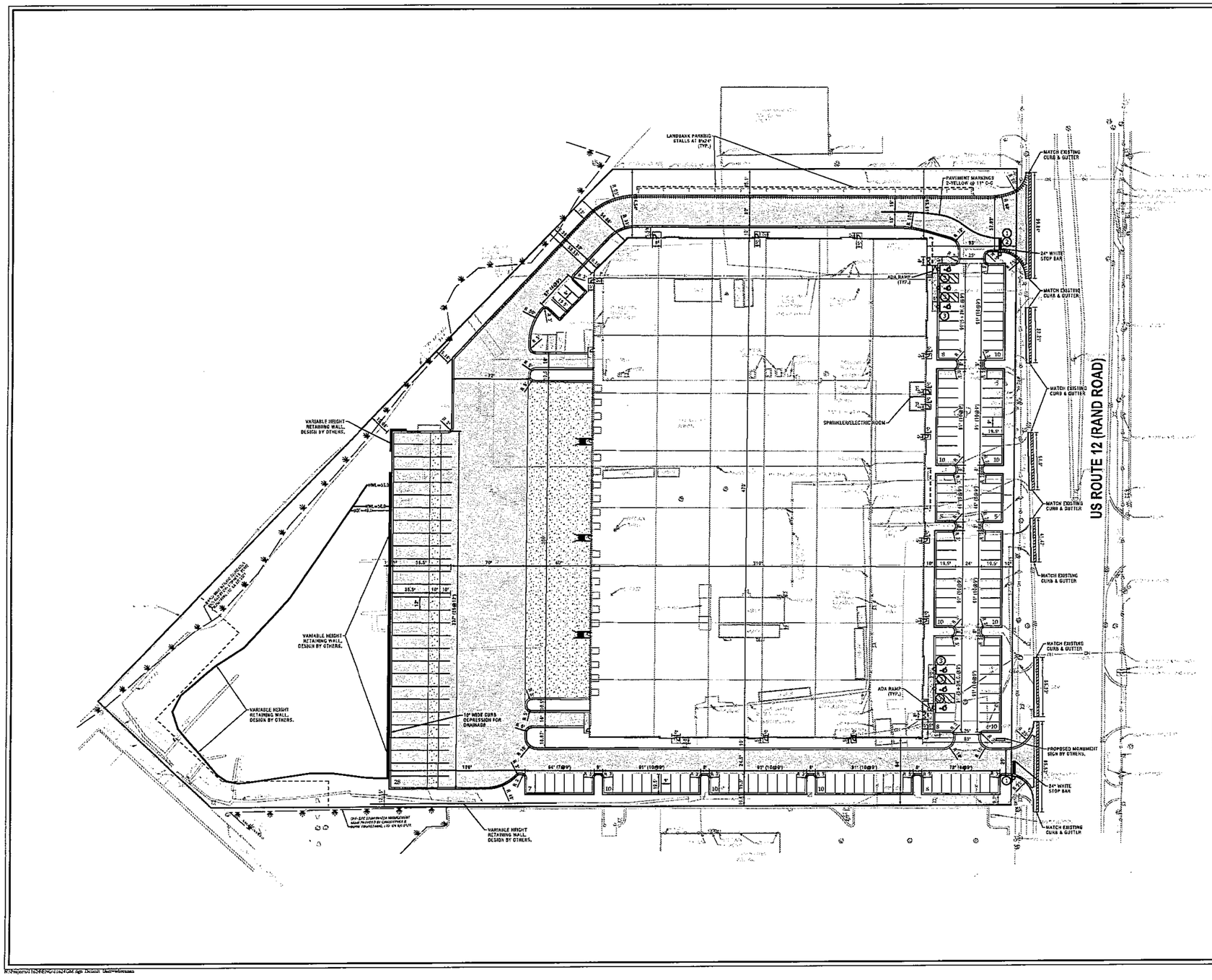
DEMOLITION PLAN

2240-2296 RAND ROAD
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700
Rosemont, Illinois 60018
Phone: (847) 696-4090 Fax: (847) 696-4099
SPACECO INC.

FILENAME: 11624DEMO
DATE: 03/16/22
JOB NO. 11624
SHEET DEMO
4 OF 18

Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)




| NO. | DATE | REMARKS |
|---|---|---|
| 2 | 04/11/22 | REVISIONS PER ARCHITECT/OWNER |
| 1 | 03/22/22 | REVISIONS PER ARCHITECT |

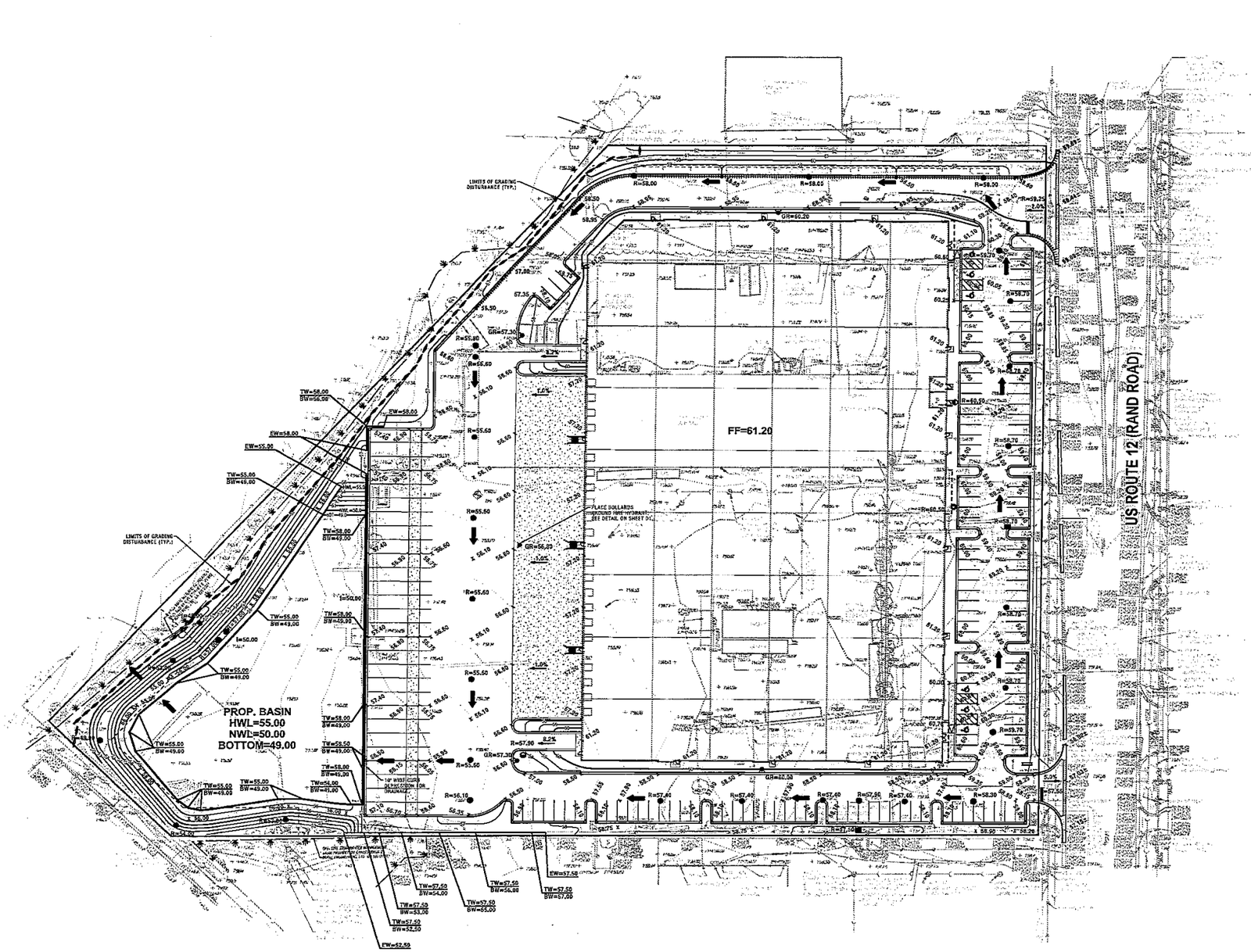
GEOMETRIC PLAN

2240-2296 RAND ROAD
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700
Rosemont, Illinois 60018
Phone: (847) 696-4900 Fax: (847) 696-4996
SPACECO INC.

FILENAME: 11624GM
DATE: 03/16/22
JOB NO. 11624
SHEET GM 5 OF 18

Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)




| NO. | DATE | REMARKS |
|---|---|---|
| 2 | 04/11/22 | REVISIONS PER ARCHITECT/OWNER |
| 1 | 03/22/22 | REVISIONS PER ARCHITECT |

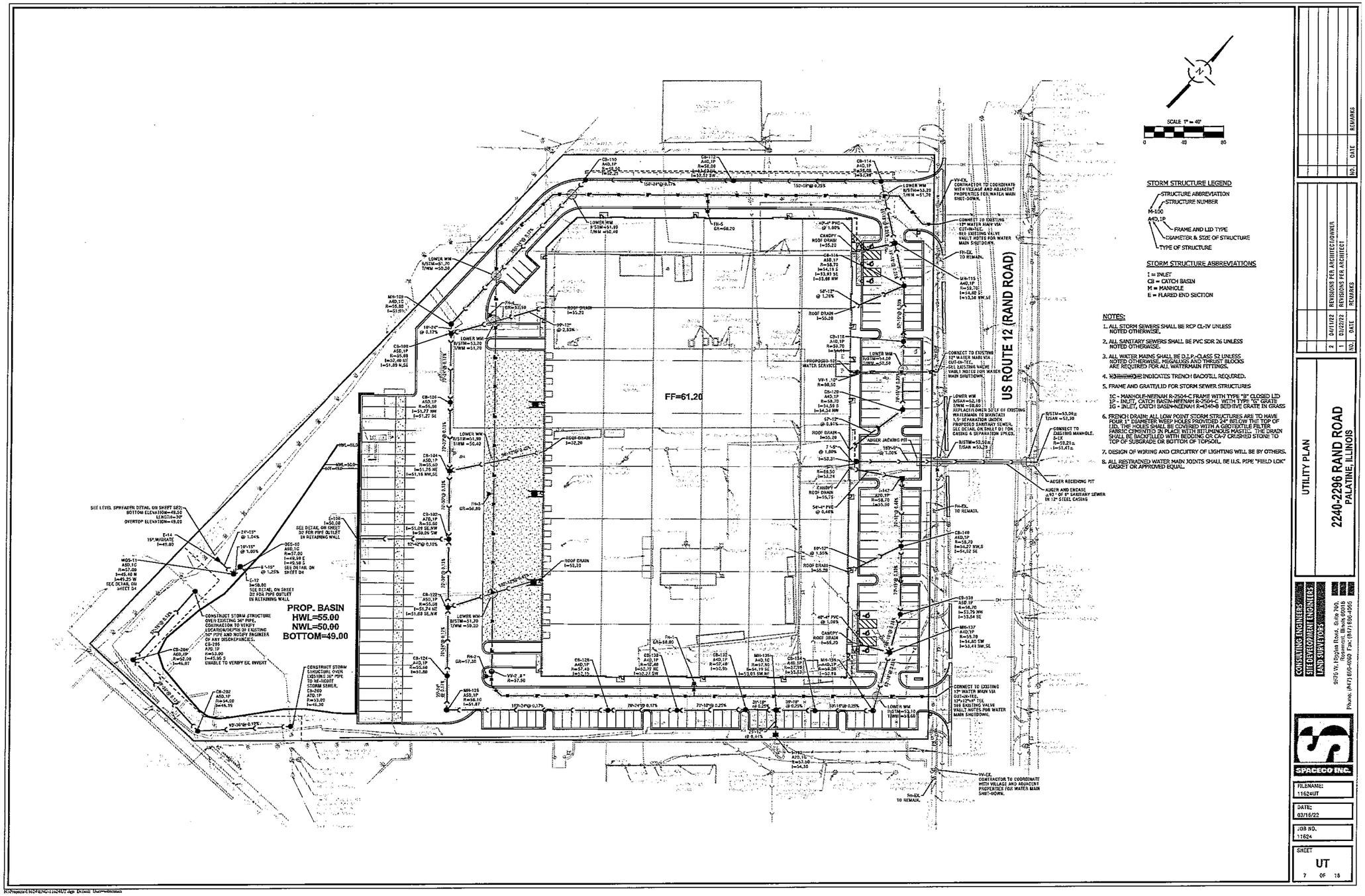
GRADING PLAN

2240-2296 RAND ROAD
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4000 Fax: (847) 696-4995
SPACECO INC.

FILENAME: 11624GR
DATE: 03/16/22
JOB NO. 11624
SHEET GR
6 OF 18

Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)




| NO. | DATE | REMARKS |
|---|---|---|
| 2 | 04/11/22 | REVISIONS PER ARCHITECT/OWNER |
| 1 | 03/02/22 | REVISIONS PER ARCHITECT |

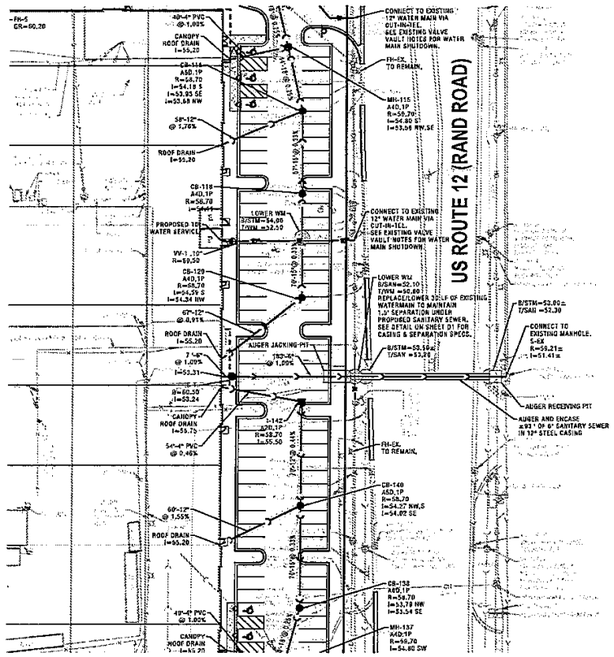
UTILITY PLAN

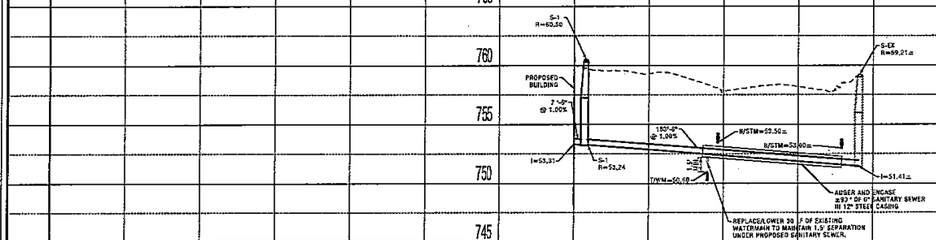
2240-2296 RAND ROAD
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
SPACECO INC.
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4080 Fax: (847) 696-4085

FILENAME: 11624UT
DATE: 02/16/22
JOB NO. 11624
SHEET UT 7 OF 18

Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)




| NO. | DATE | REMARKS |
|---|---|---|
| 2 | 04/11/22 | REVISIONS PER ARCHITECT/OWNER |
| 1 | 02/22/22 | REVISIONS PER ARCHITECT |

PLAN AND PROFILE - SANITARY SEWER SERVICE

2240-2296 RAND ROAD
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 760
Rosemont, Illinois 60018
Phone: (847) 696-8700 Fax: (847) 696-8995
SPACECO INC.

FILENAME: 11624PP01
DATE: 03/15/22
JOB NO. 11624
SHEET PP01
8 OF 15

Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)

This Soil Erosion & Sediment Control (SESC) Plan has been prepared to fulfill one of the requirements of the National Pollutant Discharge Elimination System (NPDES) General Permit No. ILR10_____. The SESC Plan should be maintained on site as an integral component of the Storm Water Pollution Prevention Plan (SWPPP). The SWPPP, including the SESC Plan, should be amended whenever there is a change in design, construction, operation, or maintenance, which has a significant effect on the potential for the discharge of pollutants to the Waters of the State and which has not otherwise been addressed in the SWPPP. The SWPPP shall also be amended if it proves to be ineffective in eliminating or significantly minimizing pollutants, or in otherwise achieving the general objectives of controlling pollutants in storm water discharges associated with construction site activity. In addition, the SWPPP shall be amended to identify any new contractor and/or subcontractor that will implement a measure of the SWPPP.

1. SITE DESCRIPTION

A. The following is a description of the nature of the construction activity: Demolition of 5 existing buildings and new construction of an industrial building with associated grading, utilities, and other improvements.

B. The following is a description of the intended sequence of construction activities which will disturb soils for major portions of the construction site:

Describe proposed construction sequence, sample follows:

1) Install perimeter sediment control measures
   a) Selective vegetation removal for silt fence installation
   b) Silt fence installation
   c) Construction fencing around areas not to be disturbed
   d) Stabilized construction entrance
2) Clear and grub (as necessary)
3) Construct sediment trapping devices (sediment traps, sediment basins, etc.)
4) Construct detention facilities and outlet control structure with restrictor & temporary perforated riser
5) Strip topsoil, stockpile topsoil and grade site
6) Temporarily stabilize topsoil stockpiles (seed and silt fence around toe of slope)
7) Install storm sewer, sanitary sewer, watermain and associated inlet protection
8) Permanently stabilize detention basins with erec and erosion control blanket
9) Temporarily stabilize all areas including lots that have reached mass grade
10) Install roadways
11) Permanently stabilize all outlet areas
12) Install buildings and grade individual lots
13) Permanently stabilize lots
14) Remove all temporary soil erosion and sediment control measures after the site is stabilized with vegetation

C. The site has a total acreage of approximately 8.95 acres. Construction activity will disturb approximately 8.71 acres of the site.

D. 1) An estimated runoff coefficient of the site after construction activities are completed is 0.82.
2) Existing data describing the soil or quality of any discharge from the site is included in the Geotechnical Investigation Report prepared by Thomas Testing Inc. & Environmental Services, LLC project no. 21-0742-111 dated August 25, 2021.

E. Refer to Sheets GR & UT for a site plan indicating:

1) drainage patterns;
2) approximate slopes anticipated before and after major grading activities;
3) locations where vehicles enter or exit the site and controls to minimize off-site sediment tracking;
4) areas of soil disturbance;
5) the location of major structural and nonstructural controls;
6) the location of areas where stabilization practices are expected to occur;
7) surface waters (including wetlands); and,
8) locations where storm water is discharged to a surface water.

F. 1) The name of the receiving water(s) is/are: Spring Creek Tributary.
2) The name of the ultimate receiving water is: Des Plaines River.
3) The extent of wetland acreage at the site is: 0.14 acres.

G. Potential sources of pollution associated with this construction activity may include:

- sediment from disturbed soils
- portable sanitary stations
- haul items
- staging areas
- waste containers
- chemical storage areas
- oil or other petroleum products
- asphaltics
- tar
- adhesives
- detergents
- fertilizers
- raw materials (e.g., bagged portland cement)
- demolition debris
- landscape waste
- concrete and concrete trucks
- litter

2. CONTROLS

This section of the SESC Plan addresses the various controls that should be implemented for each of the major construction activities described in the "Site Description" section. For each measure identified in the SWPPP, the contractor(s) or subcontractor(s) that will implement the measure should be identified. All contractors and subcontractors that are identified should be required to sign a copy of the certification statement from Part IV.F. of the ILR10 Permit (in accordance with Part VII.G. - Signatory Requirements, of the ILR10 Permit). All signed certification statements should be maintained in the SWPPP.

A. Approved State or Local Plans

The management practices, controls, and other provisions contained in the SWPPP should be at least as protective as the requirements contained in the Illinois Environmental Protection Agency's (IEPA) and the United States Department of Agriculture's Natural Resource Conservation Service Illinois Urban Manual, 2012. Requirements specified in sediment and erosion control site plans or site permits or storm water management site plans or site permits approved by local officials that are applicable to protecting surface water resources are upon submittal of a Notice of Intent (NOI) to be authorized to discharge under the ILR10 permit, incorporated by reference and are enforceable under the ILR10 permit even if they are not specifically included in a SWPPP required under the ILR10 permit. This provision does not apply to provisions of master plans, comprehensive plans, non-enforceable guidelines or technical guidance documents that are not classified in a specific plan or permit that is issued for the construction site.

The soil erosion and sediment control measures for this site should meet the requirements of the following agencies:

- Village of Palatine
- MWRD
- IEPA
- U.S. Army Corps of Engineers

B. Control Implementation Schedule

Good Management Practices will be implemented on an as-needed basis to protect water quality. Perimeter controls at the site should be installed prior to soil disturbance (excluding soil disturbance necessary to install the controls), including demolition activities. Perimeter controls, including the silt fence, should be actively maintained until final stabilization of those portions of the site upward of the perimeter control. Stabilized construction entrance(s) and sediment traps should be installed as described in the planned sequence of construction activities. The contractor is responsible for the adequate protection (including sediment control) of existing sewers and sewer structures during construction operations. As necessary, the appropriate sediment control measure should be installed prior to land disturbing activities.

Stabilization measures should be initiated where construction activities have temporarily or permanently ceased, in accordance with Local and State requirements, as described below. Once construction activity in an area has permanently ceased, that area should be permanently stabilized. Temporary perimeter controls should be removed after final stabilization of those portions of the site upward of the perimeter control.

C. Erosion and Sediment Controls

The appropriate soil erosion and sediment controls should be implemented on site and should be modified to reflect the current phase of construction. All temporary sediment and erosion control measures should be repaired or replaced as soon as practicable to maintain NPDES compliance. Permittee or an authorized agent is responsible for inspecting all sediment and erosion control measures at a minimum of every 7 calendar days and within 24 hours, or one working day, of the end of a 0.5-inch (or greater) rain event.

Unless otherwise indicated, all vegetative and structural erosion and sediment control practices should be installed to the Standard Practice. The contractor is responsible for the installation of any additional erosion and sediment control measures necessary to minimize erosion and sedimentation as determined by the Engineer or Primary Contact.

1) Stabilization Practices - Areas that will not be paved or covered with non-erosive material should be stabilized using practices in substantial conformance with the Illinois Urban Manual. This SESC Plan includes site-specific soil erosion and sediment control measures. Additional erosion controls should be implemented as necessary, as determined by the Engineer or Primary Contact.

The following temporary and permanent stabilization practices, at a minimum, are proposed:

- permanent seeding
- temporary seeding
- erosion control blanket
- other measures

Site-specific scheduling of the implementation of these practices is included in the Soil Protection Chart. A record of the dates when major grading activities occur, when construction activities cease on a portion of the site, and when stabilization measures are initiated should be included in the SWPPP.

Stabilization of disturbed areas must be initiated within 1 working day of permanent or temporary cessation of earth disturbance and shall be completed as soon as possible but not later than 14 days from the initialization of stabilization work in an area. Exceptions to these time frames are specified below.

a. Where the initiation of stabilization measures is precluded by snow cover, stabilization measures shall be initiated as soon as practicable.

b. On areas where construction activity has temporarily ceased and will resume after 14 days, a temporary stabilization method can be used. Temporary stabilization techniques and materials shall conform to the SWPPP.

2) Structural Practices - Provided below is a description of structural practices that should be implemented, to the degree attainable to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Structural practices should be placed on upland soils to the degree practicable. The installation of the following devices may be subject to Section 404 of the Clean Water Act:

- stabilized construction entrance
- silt fence
- sediment traps (provide locations and dimensions in plan set)
- other measures

D. Storm Water Management

Provided below is a description of measures that will be installed during the construction process to control the pollutants in storm water discharges that will occur after the construction operations have been completed. The installation of these devices may be subject to Section 404 of the Clean Water Act.

1) The practices selected for implementation were determined on the basis of technical guidance contained in IEPA's Illinois Urban Manual. Federal, State, and/or Local Requirements. The storm water management measures include:

- detention basins (wet basins, dry basins, etc.)
- retention basins
- vegetated swales
- infiltration trenches
- other measures

2) Velocity dissipation devices, such as rip-rap aprons at tiered end sections or level spreaders, shall be placed at discharge locations and along the length of any outlet channel as necessary to provide a non-erosive velocity flow from the structure to a watercourse so that the natural, physical, and biological characteristics and functions are maintained and protected (e.g., maintenance of hydrologic conditions, such as the hydroperiod and hydrodynamics present prior to the initiation of construction activities).

E. Waste Management

Solid waste materials including trash, construction debris, excess construction materials, machinery, tools and other items will be collected and disposed of off site by the contractor. The contractor is responsible to acquire the permit required for such disposal. Burning on site will not be permitted. No solid materials, including building materials, shall be discharged to Waters of the State, except as authorized by a Section 404 permit. All waste materials should be collected and placed in approved receptacles. No wastes should be placed in any location other than in the approved containers appropriate for the materials being discarded. There should be no liquid wastes deposited into dumpsters or other containers which may leak. Receptacles with deficiencies should be replaced as soon as possible and the appropriate clean-up procedure should take place, if necessary. Construction waste material is not to be buried on site. Waste disposal should comply with all Local, State, and Federal regulations.

On-site hazardous material storage should be maintained and stored in labeled, separate receptacles from non-hazardous waste. All hazardous waste should be disposed of in the manner specified by Local or State regulation or by the manufacturer.

F. Concrete Waste Management

Concrete waste or washout should not be allowed in the street or allowed to reach a storm water drainage system or watercourse. When practicable, a sign should be posted at each location to identify the washout. To the extent practicable, the concrete washout area should be located a reasonable distance from a storm water drainage inlet or watercourse, and should be located at least 10 feet behind the curb, if the washout area is adjacent to a paved road. A stabilized construction exit meets Illinois Urban Manual standards number for buildings at each washout.

The containment facilities should be of sufficient volume to completely contain all liquid and concrete waste materials including enough capacity for anticipated levels of rainwater. The dried concrete waste material should be picked up and disposed of properly when 75% capacity is reached. Hardened concrete can be properly recycled and used again on site (as approved by the Engineer) or hauled off site to an appropriate landfill.

G. Concrete Cutting

Concrete waste management should be implemented to contain and dispose of saw-cutting slurries. Concrete cutting should not take place during or immediately after a rainfall event. Waste generated from

concrete cutting should be cleaned-up and disposed into the concrete washout facility as described above.

H. Vehicle Storage and Maintenance

When not in use, construction vehicles should be stored in a designated area(s) outside of the regulatory floodplain, away from any natural or created watercourse, pond, drainage-way or storm drain. Controls should be installed to minimize the potential of runoff from the storage area(s) from reaching storm drains or water courses. Vehicle maintenance (including both routine maintenance as well as on-site repairs) should be made within a designated area(s) to prevent the migration of mechanical fluids (oil, antifreeze, etc.) into watercourses, wetlands or storm drains. Drip pans or absorbent pads should be used for all vehicle and equipment maintenance activities that involve grease, oil, solvents, or other chemical-related substances. Construction vehicles should be inspected frequently to identify any leaks. Leaks should be resolved immediately or the vehicle should be removed from site. Exposure of all used oil, antifreeze, solvents and other chemical-related chemicals in accordance with United States Environmental Protection Agency (USEPA) and IEPA regulations and per Material Safety Data Sheet (MSDS) and/or manufacturer instructions. Contractors should inspect for off-site material tracking. All questions, concerns and other potential storm water discharge sources should also be inspected.

B. Based on the results of the inspection, the description of potential pollutant sources identified, and the pollution prevention measures described in the SWPPP should be revised, as appropriate, as soon as practicable after the inspection. The modifications, if any, shall provide for timely implementation of any changes to the SWPPP within 7 calendar days following the inspection.

C. A report summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the SWPPP, and actions taken in accordance with paragraph B. above should be made and retained as part of the SWPPP for at least three years from the date that permit coverage expires or is terminated. The report shall be signed in accordance with Part VII.G. (Signatory Requirements) of the ILR10 NPDES Permit.

D. The Permittee shall notify the appropriate agency field operations section office by e-mail at epa.swmstaking@illinois.gov, telephone or fax within 24 hours of any incidence of noncompliance for any violation of the storm water pollution prevention plan observed during any inspection conducted or for violation of any condition of this permit. The Permittee should complete and submit within 5 days an "Incidence of Non-Compliance" (ION) report for any violation of the SWPPP observed during an inspection conducted, including those not required by the SWPPP. Submission should be on forms provided by IEPA and include specific information on the cause of non-compliance, actions which were taken to prevent any further causes of non-compliance, and a statement detailing any environmental impact, which may have resulted from the non-compliance.

E. All reports of non-compliance shall be signed by a responsible authority as defined in Part VI.G. (Signatory Requirements), of the ILR10 NPDES Permit.

F. After the initial contact has been made within the appropriate agency field operations section office, all reports of non-compliance shall be mailed to IEPA at the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Compliance Assurance Section
1021 North Grand Avenue East
Post Office Box 19273
Springfield, Illinois 62794-9276

5. NON-STORM WATER DISCHARGES

Except for flows from fire fighting activities, possible sources of non-storm water that may be combined with storm water discharges associated with the proposed activity, are described below:

- Fire fighting activities
- Fire hydrant flushings
- Water used to wash vehicles where detergents are not used
- Water used to control dust
- Potable water sources including uncontaminated waterline flushings
- Landscape irrigation drainages
- Routine external building washdown which does not use detergents
- Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (unless spilled materials have been removed) and where detergents have not been used.
- Uncontaminated air conditioning condensate
- Curbings
- Irrigation ditches
- Uncontaminated ground water
- Foundation or footing drains where flows are not contaminated with process materials such as solvents

6. PROHIBITED NON-STORMWATER DISCHARGES

- Concrete and wastewater from washout of concrete (unless managed by an appropriate control)
- Drywall compound
- Wastewater from washout and cleanout of stucco, paint
- Form release oils
- Curing compounds and other construction materials
- Fuels, oils, or other pollutants used in vehicle or equipment operation and maintenance
- Soaps, solvents, or detergents
- Toxic or hazardous substances from a spill or other release
- Any other pollutant that could cause or tend to cause water pollution

Pollution prevention measures should be implemented for non-storm water components of the discharge.

| STABILIZATION TYPE | JAN. | FEB. | MAR. | APR. | MAY | JUNE | JULY | AUG. | SEPT. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PERMANENT SEEDING | | | A | | | | | | | | | |
| DORMANT SEEDING | B | | | | | | | | | | B | |
| TEMPORARY SEEDING | | | C | | | | D | | | | | |
| SODDING | | | E** | | | | | | | | | |
| MULCHING | F | | | | | | | | | | | |

A KENTUCKY BLUEGRASS 50 LBS/ACRE MIXED WITH PERENNIAL RYEGRASS 30 LBS/ACRE

B KENTUCKY BLUEGRASS 135 LBS/ACRE MIXED WITH PERENNIAL RYEGRASS 45 LBS/ACRE -> STRAW MULCH 2 TONS/ACRE.

C SPRING OATS 100 LBS/ACRE

D WHEAT OR CEREAL RYE 150 LBS/ACRE.

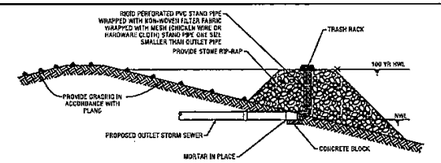
E SOD

F STRAW MULCH 2 TONS/ACRE.

* IRRIGATION NEEDED DURING JUNE AND JULY.

** IRRIGATION NEEDED FOR 2 TO 3 WEEKS AFTER APPLYING SOD.

SOIL PROTECTION CHART




PERFORATED RISER DETAIL
NOT TO SCALE

PLAN CODE: (PR)

1. THE PERFORATED RISER SHALL BE PROVIDED AS PART OF THE SEDIMENT AND EROSION CONTROL MEASURES DURING CONSTRUCTION AND IN CONJUCTION WITH THE CONSTRUCTION OF THE DETENTION BASIN.
2. WHEN THE DETENTION BASIN AND UPSTREAM TRIBUTARY DRAINAGE AREAS ARE REVEGETATED, AND WHEN DIRECTED BY THE ENGINEER, THE PERFORATED RISER SHALL BE REMOVED AND THE BASIN OUTFALL STRUCTURE SHALL BE CONSTRUCTED AND THE GRADING RESTORED IN ACCORDANCE WITH THE PLANS.

CONTRACTOR CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND CONDITIONS OF THE GENERAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT (ILR10) THAT AUTHORIZES THE STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE CONSTRUCTION SITE IDENTIFIED AS PART OF THIS CERTIFICATION.

PROJECT:_____

PERMIT #: ILR10_____ DATE

CONTRACTOR SIGNATURE TELEPHONE NUMBER

PRINTED NAME & TITLE

NAME OF CONTRACTING FIRM

STREET ADDRESS

CITY, STATE, ZIP CODE

TRADE/ RESPONSIBILITIES:_____

NOTE:
ALL CONTRACTORS PERFORMING WORK ON THIS SITE ARE REQUIRED TO SIGN A CONTRACTOR CERTIFICATION STATEMENT AS ILLUSTRATED ABOVE. THE SIGNED STATEMENTS WILL BE MAINTAINED ON THE SITE WITH THE SWPPP.

OWNER SWPPP CERTIFICATION

PROJECT:_____

PERMIT #: ILR10_____

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

SIGNATURE OF OWNER DATE

PRINTED NAME OF OWNER

NOTE:
THE CERTIFICATION ILLUSTRATED ABOVE SHALL BE SIGNED BY THE OWNER LISTED ON THE NOTICE OF INTENT IN ACCORDANCE WITH PART VII.G. OF THE ILR10 NPDES PERMIT. THE SIGNED STATEMENT SHALL BE MAINTAINED ON THE SITE WITH THE SWPPP.

| OUTFALL NAME OR NUMBER | INLET PIPE SIZE d (IN) | VELOCITY (V/s) | LENGTH OF APRON L (FT) | RIPRAP GRADATION | WIDTH OF APRON W/S FACE 3d (FT) | WIDTH OF APRON D/S FACE 3d+L (FT) | DEPTH OF RIPRAP Y (IN) |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

| NO. | DATE | REMARKS |
|---|---|---|
| | | |

| NO. | DATE | REVISIONS PER ARCHITECT/OWNER |
|---|---|---|
| 2 | 6/21/22 | REVISIONS PER ARCHITECT |
| 1 | 5/20/22 | REVISIONS PER ARCHITECT |

SOIL EROSION AND SEDIMENT CONTROL PLAN

2240-2296 RAND ROAD
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700
Rosemont, Illinois 60018
Phone: (847) 696-4100 Fax: (847) 696-4555

SPACECO INC.

FILENAME:

DATE: 03/16/22

JOB NO. 11624

SHEET SE1

9 OF 18

Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)

PLAN CODE: SB

INLET PROTECTION - EXCAVATED DRAIN PLAN

PLAN VIEW

TYPICAL SECTION A-A

NOTES:
1. Sediment shall be removed and the trap restored to the original dimensions when the sediment has accumulated to 1/2 the design depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
2. The sediment trap shall be removed and the area stabilized when the constructed drainage area has been properly stabilized.
3. All cut slopes shall be 2:1 or flatter.

PLAN CODE: IP

LEVEL SPREADER

LEVEL SPREADER FOR DIVERSION OUTLET

LEVEL SPREADER FOR IMPERVIOUS AREAS

PLAN CODE: LS

LEVEL SPREADER

RIGID LIP WITH TIMBER
(DESIGN FLOWS 4 C.F.S. TO 30 C.F.S.)

VEGETATED LIP
(DESIGN FLOWS 4 C.F.S. OR LESS)

PLAN CODE: LS

RIGHT OF WAY DIVERSION PLAN

TYPICAL GRAVEL STRUCTURE

TYPICAL EARTHEN STRUCTURE

NOTES:
1. Install the diversion as soon as right-of-way has been cleared and grubbed.
2. Dig the base for the constructed ridge before placing fill.
3. Track the ridge to compact it to the design cross section.
4. Lime to the outlet on an undisturbed area. Adjust field spacing of the diversion to use the next stable outlet areas. When natural areas are not deemed satisfactory, provide outlet protection.
5. Immediately seed and mulch the portions of the diversions not subject to construction traffic. Stabilize with grass seed to be crossed by vehicle.
6. Coarse aggregate, if used, shall meet one of the following IDOT gradations: CA-1,CA-2,CA-3, OR CA-4.

PLAN CODE: RD

PIPE OUTLET TO FLAT AREA

Pipe Outlet To Flat Area
No Well-Defined Channel

PLAN

SECTION A-A

NOTES:
1. The filter fabric shall meet the requirements in material specifications IDOT DESCRIPTIVE Table 1 or 2, Class 2, 2I or 3II.
2. The rock riprap shall meet the IDOT requirements for the following gradation for _____ Quality _____.
3. The riprap shall be placed according to construction specification 61 LOOSE ROCK RIPRAP. The rock may be equipment placed.

PLAN CODE: LA

PIPE OUTLET TO CHANNEL

Pipe Outlet To Well-Defined Channel

PLAN

SECTION A-A

PLAN CODE: LA

NOTES:
1. The filter fabric shall meet the requirements in material specifications IDOT DESCRIPTIVE Table 1 or 2, Class 2, 2I or 3II.
2. The rock riprap shall meet the IDOT requirements for the following gradation _____ .
3. The riprap shall be placed according to construction specification 61 LOOSE ROCK RIPRAP. The rock may be equipment placed.

STABILIZED CONSTRUCTION ENTRANCE PLAN

PLAN VIEW

SIDE ELEVATION

NOTES:
1. Filter fabric shall meet the requirements of material specification IDOT DESCRIPTIVE, Table 1 or 2, Class 2, 2I or 3V and shall be placed over the cleared area before the placement of rock.
2. Rock or reclaimed concrete shall meet one of the following IDOT coarse aggregate gradation: CA-1, CA-2, CA-3 or CA-4 and be placed according to construction specification 25 ROCKFILL using placement Method 1 And Class III compaction.
3. Any drainage facilities required because of washing shall be constructed according to manufacturers specifications.
4. Filter cloth used they shall be installed according to the manufacturer's specifications.

PLAN CODE: SE

STABILIZED CONSTRUCTION ENTRANCE PLAN

SECTION A-A

SECTION B-B

PLAN CODE: SE

SUMP PIT PLAN

SECTION

NOTES:
1. Pit dimensions are optional.
2. The standpipe will be constructed by perforating a 12"-24" diameter corrugated metal or PVC pipe.
3. A layer of 2" aggregate will be placed in the pit to a minimum depth of 12". After installing the standpipe, the pit surrounding the standpipe will then be backfilled with 2" aggregate.
4. The standpipe will extend 18" to 36" above the lip of the pit.
5. If discharge will be pumped directly to a storm drainage system, the standpipe will be wrapped with filter fabric before installation.
6. If desired, 1/4"-1/2" hardware cloth may be placed around the standpipe prior to attaching the filter fabric, this will increase the rate of water seepage into the pipe.

PLAN CODE: SP

TEMPORARY SEDIMENT TRAP

CROSS SECTION

STONE SECTION

NOTES:
1. If the sediment pool is formed or enlarged the side slope will be 2:1 or flatter.
2. The fill shall be constructed using IDOT RR-4 stone size. A layer of IDOT CA-4 should be placed on the inside face to reduce the flow rate.
3. The rock fill be placed according to construction specification 25 ROCKFILL. Placement will be by Method 1 and compaction will be Class III.
4. The geotextile shall meet the requirements in material specification IDOT DESCRIPTIVE Table 1 or 2, Class 1, 2I or 3V.

PLAN CODE: ST

SILT FENCE PLAN
SPACECO, INC. PRIMARY DETAIL

ELEVATION

FABRIC ANCHOR DETAIL

SILT FENCE WITH WIRE SUPPORT PLAN
SPACECO, INC. ALTERNATE DETAIL

ELEVATION

FABRIC ANCHOR DETAIL

STATIC SLICE INSTALLATION TRENCH INSTALLATION

NOTES:
1. Silt Fence shall be installed prior to any grading work in the area to be protected. They shall be maintained throughout the construction period and removed in conjunction with the final grading and site stabilization. Silt fence shall be placed on the flattest area available.
2. Filter fabric shall meet the requirements of material specification IDOT Geotextile Table 1 or 2, Class 2 with equivalent opening size of at least 30 for nonwoven and 40 for woven.
3. Fence posts shall be either standard steel post or wood post with a minimum cross-sectional area of 3.0 sq. in.

PLAN CODE: SF

TREE PROTECTION - FENCING

SIDE VIEW

POST AND FENCE DETAIL

NOTES:
1. The fence shall be located a minimum of 1 foot outside the drip line of the tree to be saved and in no case closer than 5 feet to the trunk of any tree.
2. Fence posts shall be either standard steel posts or wood posts with a minimum cross sectional area of 3.0 sq. in.
3. The fence may be either 42" high snow fence, 42" plastic web fencing or any other material as approved by the engineer/forester.

PLAN CODE: TP

**Catch-All** - is a manufactured inlet filtration device designed to significantly reduce the ingress of pollutants into stormwater systems, and therefore, improve water quality. Designs are available for a custom fit in virtually any drainage structure casting.

Catch-All HR is available to provide the added benefit of hydrocarbon removal.

Drain Inserts

PLAN CODE: FF

YARD GRATE INLET PROTECTION

YARD GRATE INLET PROTECTION

PLAN CODE: FF

TEMPORARY CONCRETE WASHOUT FACILITY - BARRIER WALL

TEMPORARY CONCRETE WASHOUT FACILITY - EARTHEN TYPE

TEMPORARY CONCRETE WASHOUT FACILITY - STRAW BALE

PLAN CODE: CW

PLAN CODE: DC

| NO. | DATE | REMARKS |
|---|---|---|
| 2 | 04/11/22 | REVISIONS PER ARCHITECT/OWNER |
| 1 | 03/28/22 | REVISIONS PER ARCHITECT |

SOIL EROSION AND SEDIMENT CONTROL PLAN

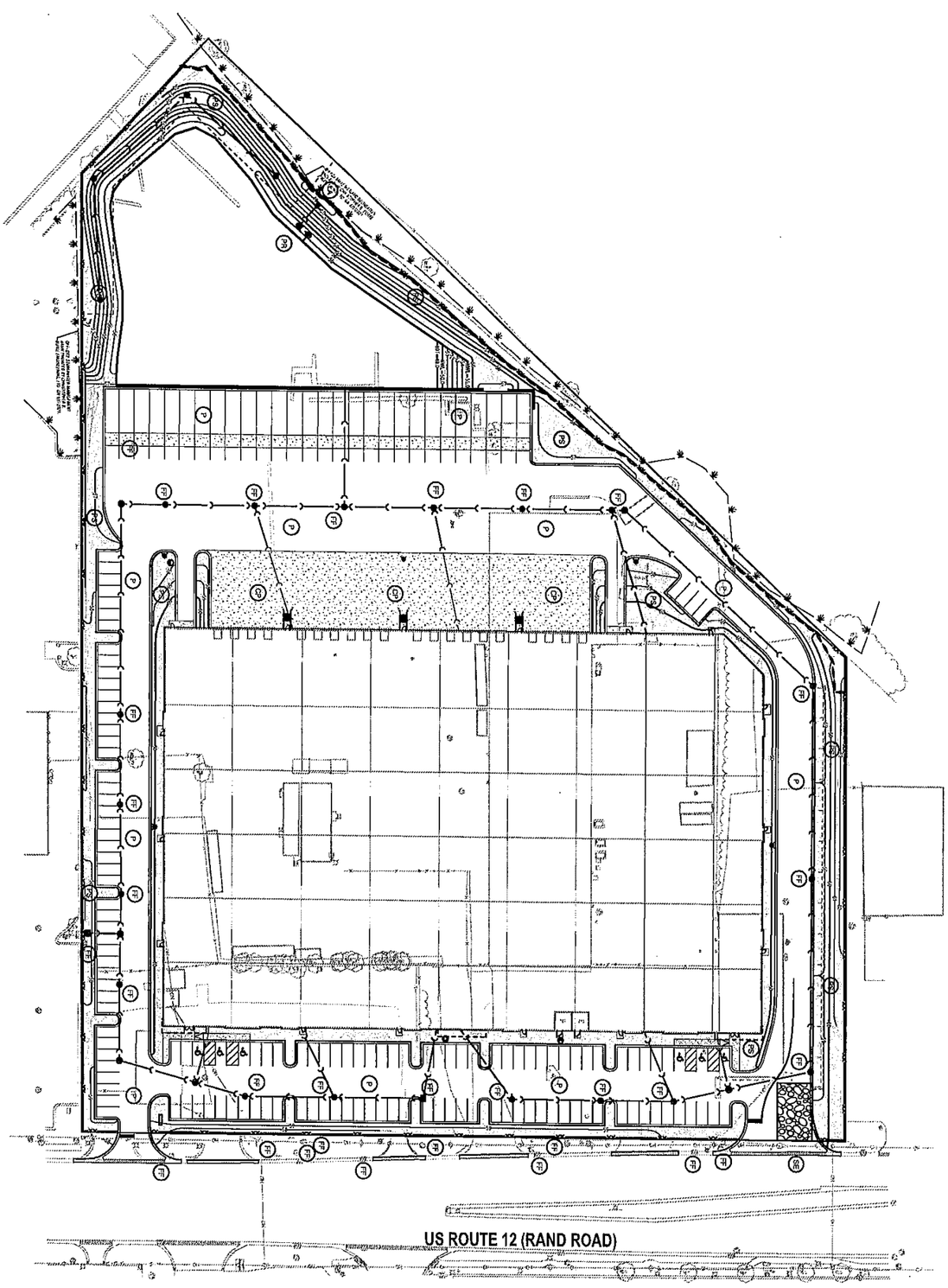
2240-2296 RAND ROAD
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 760,
Rosemont, Illinois 60018
Phone: (847) 696-4050 Fax: (847) 696-4055

SPACECO INC.

FILENAME: 11624SE2
DATE: 03/15/22
JOB NO. 11624
SHEET SE2
10 OF 18

Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)




SYMBOL LEGEND

- STABILIZED CONSTRUCTION ENTRANCE
- SILT FENCE
- FABRIC FILTER
- PAVING
- PERMANENT SEEDING
- LINED APRON
- CONCRETE PAVEMENT
- PERFORATED RISER
- NORTH AMERICAN GREEN S75 EROSION CONTROL BLANKET

SCALE: 1"=40'

0 20 40

N

SHEET SE3 11 of 18

JOB NO. 11824

DATE: 03/16/22

FILENAME: 11824SE3

SPACECO INC.

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

9575 W. Higgins Road, Suite 700
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4555

SOIL EROSION AND SEDIMENT CONTROL PLAN

2240-2296 RAND ROAD
PALATINE, ILLINOIS

| NO. | DATE | REMARKS |
|---|---|---|
| 2 | 04/11/22 | REVISIONS PER ARCHITECT/OWNER |
| 1 | 03/22/22 | REVISIONS PER ARCHITECT |

| NO. | DATE | REMARKS |
|---|---|---|

## EARTHWORK NOTES

1. GENERAL

   A. IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE SOIL AND GROUNDWATER CONDITIONS AT THE SITE. THE CONTRACTOR SHALL OBTAIN AND READ THE GEOTECHNICAL REPORTS AVAILABLE FROM THE OWNER.

   B. ANY QUANTITIES IN THE BID PROPOSAL ARE INTENDED AS A GUIDE FOR THE CONTRACTOR'S USE IN DETERMINING THE SCOPE OF THE COMPLETED PROJECT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ALL MATERIAL QUANTITIES AND APPRAISE HIMSELF OF ALL SITE CONDITIONS. THE CONTRACT PRICE SUBMITTED BY THE CONTRACTOR SHALL BE CONSIDERED AS LUMP SUM FOR THE COMPLETE PROJECT. NO CLAIMS FOR EXTRA WORK WILL BE RECOGNIZED UNLESS ORDERED IN WRITING BY THE OWNER.

   C. THE CONTRACTOR WILL NOTE THAT THE ELEVATIONS SHOWN ON THE CONSTRUCTION PLANS ARE FINISHED GRADE ELEVATIONS AND THAT PAVEMENT THICKNESS, TOPSOIL, ETC. MUST BE SUBTRACTED TO DETERMINE SUBGRADE ELEVATIONS.

   D. THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE DURING CONSTRUCTION, AND PREVENT STORMWATER FROM RUNNING INTO OR STANDING IN EXCAVATED AREAS. THE FAILURE TO PROVIDE PROPER DRAINAGE WILL VOIDATE ANY POSSIBLE ADDED COMPENSATION REQUESTED DUE TO DELAYS OR UNSUITABLE MATERIALS CREATED AS A RESULT THEREOF. FINAL GRADES SHALL BE PROTECTED AGAINST DAMAGE FROM EROSION, SEDIMENTATION AND TRAFFIC.

   E. PLANS FOR THE SITE DEWATERING, IF EMPLOYED, SHALL BE SUBMITTED TO AND APPROVED BY THE OWNER PRIOR TO IMPLEMENTATION. NO ADDITIONAL COMPENSATION SHALL BE MADE FOR DEWATERING DURING CONSTRUCTION.

   F. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTATION OF THE SOIL EROSION AND SEDIMENTATION CONTROL MEASURES, THE INITIAL ESTABLISHMENT OF EROSION CONTROL PROCEDURES AND THE PLACEMENT OF SILT AND FILTER FENCING, ETC. TO PROTECT ADJACENT PROPERTY, WETLANDS, ETC. SHALL OCCUR BEFORE GRADING BEGINS. A MUNICIPAL EROSION CONTROL INSPECTION MAY BE REQUIRED BEFORE ANY EARTHWORK IS PERFORMED.

   G. PRIOR TO COMMENCEMENT OF GRADING ACTIVITIES, THE CONTRACTOR SHALL ERECT A "SNOW FENCE" AROUND ANY TREE DESIGNATED TO BE PRESERVED. SAID FENCE SHALL BE PLACED IN A CIRCLE CENTERED AROUND THE TREE. THE DIAMETER OF WHICH SHALL BE EQUAL THAT THE ENTIRE DRIP ZONE (EXTENT OF FURTHEST EXTENDING BRANCHES) SHALL BE WITHIN THE FENCE LIMITS. THE EXISTING GRADE WITHIN THE FENCED AREA SHALL NOT BE DISTURBED.

   H. EXCESS MATERIALS, IF NOT UTILIZED AS FILL, SHALL BE COMPLETELY REMOVED FROM THE CONSTRUCTION SITE AND DISPOSED OF OFF-SITE BY THE CONTRACTOR.

   I. ALL EARTHWORK SHALL BE DONE UNDER THE SUPERVISION OF AN ILLINOIS LICENSED ENGINEER WHO SPECIALIZES IN THE GEOTECHNICAL FIELD (SOILS ENGINEER). THIS ENGINEER WILL BE RESPONSIBLE FOR ENSURING THAT ALL UNSUITABLE MATERIALS ARE REMOVED, ALL STRUCTURAL FILL MATERIALS ARE PROPERLY PLACED AND COMPACTED, ALL PAVEMENT SUBGRADES ARE PROPERLY PREPARED, PROOF ROLLING (UNDERCUTS AND BASE COURSES), AND ENSURING THAT ALL WATER RETAINING EMBANKMENTS ARE PROPERLY CONSTRUCTED. THE DEVELOPER PAYS FOR ALL GEOTECHNICAL SERVICES.

2. TOPSOIL EXCAVATION INCLUDES:

   A. EXCAVATION OF TOPSOIL AND OTHER STRUCTURALLY UNSUITABLE MATERIALS WITHIN THOSE AREAS THAT WILL REQUIRE EARTH EXCAVATION OR COMPACTED EARTH FILL MATERIAL. EXISTING VEGETATION SHALL BE REMOVED PRIOR TO STRIPPING TOPSOIL OR FILLING AREAS.

   B. PLACEMENT OF THE EXCAVATED MATERIAL IN OWNER DESIGNATED AREAS FOR FUTURE USE WITHIN AREAS TO BE LANDSCAPED, AND THOSE AREAS NOT REQUIRING STRUCTURAL FILL MATERIAL. PROVIDE NECESSARY EROSION CONTROL MEASURES FOR STOCKPILE.

   C. TOPSOIL STOCKPILED FOR RESPREAD SHALL BE FREE OF CLAY AND SHALL NOT CONTAIN ANY OF THE TRANSITIONAL MATERIAL BETWEEN THE TOPSOIL AND CLAY. THE TRANSITIONAL MATERIAL SHALL BE USED IN NON-STRUCTURAL FILL AREAS OR DISPOSED OF OFF-SITE.

   D. TOPSOIL RESPREAD SHALL INCLUDE MAULING AND SPREADING 6" OF TOPSOIL OVER AREAS TO BE LANDSCAPED WHERE SHOWN ON THE PLANS OR DIRECTED BY THE OWNER.

   E. MODERATE COMPACTION IS REQUIRED IN NON-STRUCTURAL FILL AREAS.

3. EARTH EXCAVATION INCLUDES:

   A. EXCAVATION OF CLAY AND OTHER MATERIALS WHICH ARE SUITABLE FOR USE AS STRUCTURAL FILL. THE EXCAVATION SHALL BE TO WITHIN A TOLERANCE OF 0.1 FEET OF THE PLAN SUBGRADE ELEVATIONS WHILE MAINTAINING PROPER DRAINAGE. THE TOLERANCE WITHIN PAVEMENT AREAS SHALL BE SUCH THAT THE EARTH MATERIALS SHALL "BALANCE" DURING THE FINE GRADING OPERATION.

   B. PLACEMENT OF THE CLAY AND OTHER SUITABLE MATERIALS SHALL BE WITHIN THOSE AREAS REQUIRING STRUCTURAL FILL IN ORDER TO ACHIEVE THE PLAN SUBGRADE ELEVATIONS TO WITHIN A TOLERANCE OF 0.1 FEET. THE FILL MATERIAL SHALL BE PLACED IN LOOSE LIFTS THAT SHALL NOT EXCEED EIGHT (8) INCHES IN THICKNESS, AND THE WATER CONTENT SHALL BE ADJUSTED IN ORDER TO ACHIEVE REQUIRED COMPACTION.

      STRUCTURAL FILL MATERIAL MAY BE PLACED WITHIN THOSE PORTIONS OF THE SITE NOT REQUIRING STRUCTURAL FILL, TO WITHIN SIX (6) INCHES OF THE PLAN FINISHED GRADE ELEVATION, IN AREAS REQUIRING STRUCTURAL FILL. HOWEVER, THE MATERIAL SHALL NOT BE PLACED OVER TOPSOIL OR OTHER UNSUITABLE MATERIALS UNLESS SPECIFICALLY DIRECTED BY A SOILS ENGINEER WITH THE CONCURRENCE OF THE OWNER.

   C. COMPACTION OF THE CLAY AND OTHER SUITABLE MATERIALS, SHALL BE TO AT LEAST 95% OF THE MODIFIED PROCTOR DRY DENSITY WITHIN PROPOSED PAVEMENT AREAS, SIDEWALK, ETC. COMPACTION SHALL BE AT LEAST 90% OF THE MODIFIED PROCTOR WITHIN PROPOSED BUILDING PAD AREAS.

   D. EXCAVATION: QUANTITIES OF EARTH EXCAVATION INDICATED ELSEWHERE IN THIS CONTRACT HAVE BEEN COMPUTED BY THE END AREA METHOD AS PROVIDED FOR IN SECTION 202 OF THE STANDARD SPECIFICATIONS. EXCAVATED MATERIALS NOT NEEDED FOR THIS JOB SITE SHALL BE LEGALLY DISPOSED OF. PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE PER CUBIC YARD OF EARTH EXCAVATION.

4. UNSUITABLE MATERIAL

   UNSUITABLE MATERIAL SHALL BE CONSIDERED AS MATERIAL WHICH IS NOT SUITABLE FOR THE SUPPORT OF PAVEMENT AND BUILDING CONSTRUCTION, AND IS ENCOUNTERED BELOW NORMAL TOPSOIL DEPTHS AND THE PROPOSED SUBGRADE ELEVATION. THE DECISION TO REMOVE SAID MATERIAL, AND TO WHAT EXTENT, SHALL BE MADE BY A SOILS ENGINEER WITH THE CONCURRENCE OF THE OWNER.

5. MISCELLANEOUS THE CONTRACTOR SHALL:

   A. SPREAD AND COMPACT UNIFORMLY TO THE DEGREE SPECIFIED ALL EXCESS TRENCH SPOIL AFTER COMPLETION OF THE UNDERGROUND IMPROVEMENTS.

   B. SCARIFY, DISC, AERATE, AND COMPACT, TO THE DEGREE SPECIFIED, THE UPPER TWELVE (12) INCHES OF THE SUITABLE SUBGRADE MATERIAL, IN ALL AREAS THAT MAY BE SOFT DUE TO EXCESS MOISTURE CONTENT. THIS APPLIES TO CUT AREAS AS WELL AS FILL AREAS.

   C. PROVIDE WATER TO ADD TO DRY MATERIAL IN ORDER TO ADJUST THE MOISTURE CONTENT FOR THE PURPOSE OF ACHIEVING THE SPECIFIED COMPACTION.

   D. BACKFILL THE CURB AND GUTTER AFTER ITS CONSTRUCTION AND PRIOR TO THE PLACEMENT OF THE BASE COURSE MATERIAL. THE CURBS SHALL NOT BE BACKFILLED UNTIL THE CONCRETE HAS CURED FOR AT LEAST 7 DAYS.

   E. TRENCH COMPACTION: ALL TRENCHES SHALL BE COMPACTED BY MECHANICAL TECHNIQUES APPROVED BY THE SOILS ENGINEER UNITS, PROPER COMPACTION IS ACHIEVED. THE REQUIREMENT FOR MECHANICAL COMPACTION MAY BE WAIVED IF, IN THE OPINION OF THE SOILS ENGINEER AND THE MUNICIPAL ENGINEER, THE BACKFILLED TRENCHES MEET THE DENSITY REQUIREMENTS. JETTING OF TRENCHES FOR COMPACTION WILL NOT BE ALLOWED.

6. TESTING AND FINAL ACCEPTANCE

   A. THE CONTRACTOR SHALL PROVIDE AS A MINIMUM, A FULLY LOADED SIX-WHEEL TANDEM AXLE TRUCK FOR PROOF ROLLING THE PAVEMENT SUBGRADE PRIOR TO THE PLACEMENT OF THE CURB AND GUTTER AND THE BASE MATERIAL. THIS SHALL BE WITNESSED BY MUNICIPAL ENGINEER AND THE OWNER. SEE PAVING SPECIFICATION.

   B. ANY UNSUITABLE AREA ENCOUNTERED AS A RESULT OF PROOF ROLLING SHALL BE REMOVED AND REPLACED WITH SUITABLE MATERIAL, OR OTHERWISE CORRECTED, APPROVED BY THE SOILS CONSULTANT.

   C. ANY TESTING THAT IS REQUIRED OF THIS CONSTRUCTION IS CONSIDERED INCIDENTAL TO THE COST OF CONSTRUCTION. NO SEPARATE PAYMENT WILL BE MADE.

## SIGNING AND PAVEMENT MARKING

1. ALL SIGNING AND PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH THE ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (SSRBC), MUNICIPAL CODE AND THESE PLANS.
2. CONTRACTOR SHALL ESTABLISH LOCATION OF ALL SIGNS AND MARKINGS FOR APPROVAL BY THE OWNER PRIOR TO INSTALLATION.
3. SIGNS: SIGNS SHALL BE CONSTRUCTED OF 0.080 INCH THICK FLAT ALUMINUM PANELS WITH REFLECTORIZED LEGEND ON THE FACE IN ACCORDANCE WITH (SSRBC) SECTION 729. LEGEND SHALL BE IN ACCORDANCE WITH MUTCD AND AS SHOWN ON THE PLANS.
4. POSTS: SIGN POSTS SHALL BE A HEAVY DUTY STEEL "U" SHAPED CHANNEL WEIGHING 3.0 POUNDS/FOOT SIZED AS A TYPE B METAL POST PER (SSRBC) SECTION 729 (OR) 2" PERFORATED STEEL TUBE PER (SSRBC) SECTION 729).
5. SIGNS AND POSTS SHALL BE INSTALLED IN ACCORDANCE WITH THE ABOVE (SSRBC) SECTIONS AND IDOT STANDARD 728001 EXCEPT AS MODIFIED BY THE PLANS.
6. PAVEMENT MARKINGS: ALL PAVEMENT MARKINGS IN THE ROADWAY LIMITS, SUCH AS STOP LINES, CENTERLINES, CROSSWALKS AND DIRECTIONAL ARROWS SHALL BE REFLECTORIZED THERMOPLASTIC PER (SSRBC) SECTION 780, EXCEPT AS MODIFIED BY THE PLANS. (NOTE TO ENGINEER: IDOT PREFERS REFLECTORIZED PAINT ON CONCRETE PAVEMENT - CHECK WITH AGENCY WHO WILL MAINTAIN ROAD.)
7. PAVEMENT MARKINGS ON SIDE PATHS, PARKING LOT STALLS, AND SIMILAR "LOW WEAR" APPLICATION, SHALL BE PAINT IN ACCORDANCE TO (SSRBC) SECTION 780, EXCEPT AS MODIFIED BY THE PLANS. REFLECTIVE BEADS ARE NOT REQUIRED.
8. COLOR, WIDTH, STYLE, AND SIZE OF ALL MARKINGS SHALL BE IN ACCORDANCE WITH (MUTCD) EXCEPT AS MODIFIED BY THE PLANS.
9. THERMOPLASTIC MARKINGS SHALL BE INSTALLED WHEN THE PAVEMENT TEMPERATURE IS 50° F AND RISING. PAINT MARKINGS MAY BE INSTALLED WHEN THE AIR TEMPERATURE IS 50° F AND RISING.

## PAVING NOTES

1. GENERAL

   A. PAVING WORK INCLUDES FINAL SUBGRADE SHAPING, PREPARATION AND COMPACTION; PLACEMENT OF SUB-BASE OR BASE COURSE MATERIALS; BITUMINOUS BINDER AND/OR SURFACE COURSES; FORMING, FINISHING AND CURING CONCRETE PAVEMENT, CURBS AND WALKS; AND FINAL CLEANUP AND ALL RELATED WORK.

   B. COMPACTION REQUIREMENTS: (REFERENCE ASTM D-1557 (MODIFIED PROCTOR)) SUB-GRADE = 92%; SUB-BASE = 95%; AGGREGATE BASE COURSE = 95%; BITUMINOUS COURSES = REFER TO SSRBC ARTICLE 402.07. THE SOILS ENGINEER IS RESPONSIBLE FOR ENSURING THAT MATERIALS ARE PROPERLY PLACED AND COMPACTED.

   C. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO PROVIDE PROPER BARRICADING, WARNING DEVICES AND THE SAFE MANAGEMENT OF TRAFFIC WITHIN THE AREA OF CONSTRUCTION. ALL SUCH DEVICES AND THEIR INSTALLATION SHALL CONFORM TO THE ILLINOIS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION AND IN ACCORDANCE WITH THE MUNICIPAL CODE.

2. SUB-GRADE PREPARATION

   A. EARTHWORK FOR PROPOSED PAVEMENT SUBGRADE SHALL BE FINISHED TO WITHIN 0.1 FOOT, PLUS OR MINUS, OF PLAN ELEVATION. THE CONTRACTOR SHALL SATISFY HIMSELF THAT THE SUBGRADE HAS BEEN PROPERLY PREPARED AND THAT THE FINISH TOP SUBGRADE ELEVATION HAS BEEN GRADED WITHIN TOLERANCES ALLOWED IN THESE SPECIFICATIONS, UNLESS THE CONTRACTOR ADVISES THE OWNER AND ENGINEER IN WRITING PRIOR TO FINE GRADING FOR BASE COURSE CONSTRUCTION, IT IS UNDERSTOOD THAT HE HAS APPROVED AND ACCEPTS THE RESPONSIBILITY FOR THE SUBGRADE.

   B. PRIOR TO THE PLACEMENT OF THE BASE COURSE, THE SUBGRADE MUST BE PROOF ROLLED AND INSPECTED FOR UNSUITABLE MATERIALS AND/OR EXCESSIVE MOVEMENT. THE SOILS ENGINEER SHALL CONDUCT AND THE VILLAGE SHALL WITNESS ALL PROOF ROLLS. IF UNSUITABLE SUBGRADE IS ENCOUNTERED, IT SHALL BE CORRECTED IN A MANNER APPROVED BY THE OWNER OR HIS REPRESENTATIVE. THIS MAY INCLUDE ONE OR MORE OF THE FOLLOWING METHODS:
      1) SCARIFY DISC AND AERATE,
      2) REMOVE AND REPLACE WITH STRUCTURAL CLAY FILL,
      3) REMOVE AND REPLACE WITH GRANULAR MATERIAL,
      4) USE OF GEOTEXTILE FABRIC.

      MAXIMUM DEFLECTION ALLOWED IN ISOLATED AREAS MAY BE 1/4" TO 1/2" IF NO DEFLECTION OCCURS OVER THE MAJORITY OF THE AREA.

   C. PRIOR TO THE CONSTRUCTION OF THE CURB AND GUTTER AND THE PLACEMENT OF THE BASE MATERIAL, THE PAVEMENT AREA SHALL BE FINE GRADED TO WITHIN 0.04 FEET (1/2") OF FINAL SUBGRADE ELEVATION, TO A POINT TWO (2) FEET BEYOND THE BACK OF CURB, SO AS TO INSURE THE PROPER THICKNESS OF PAVEMENT COURSES. NO CLAIMS FOR EXTRA QUANTITY OF BASE MATERIAL DUE TO IMPROPER SUBGRADE PREPARATION WILL BE HONORED.

   D. PRIOR TO PLACEMENT OF THE BASE COURSE, ALL SUBGRADES MUST BE APPROVED BY THE MUNICIPAL ENGINEER, SOILS ENGINEER AND/OR OWNER.

3. CONCRETE WORK

   A. ALL EXTERIOR CONCRETE SHALL BE PORTLAND CEMENT CONCRETE CLASS SI OR PV PER (SSRBC) SECTION 1020 OR WITH AIR ENTRAINMENT OF NOT LESS THAN FIVE (5%) OR MORE THAN EIGHT (8%) PERCENT. CONCRETE SHALL BE A MINIMUM OF SIX (6) BAG MIX AND SHALL DEVELOP A MINIMUM OF 3,500 PSI COMPRESSIVE STRENGTH AT FOURTEEN (14) DAYS. ALL CONCRETE SHALL BE BROOM FINISHED PERPENDICULAR TO THE DIRECTION OF TRAFFIC. THE ADDITION OF CALCIUM CHLORIDE AND THE SUBSTITUTION OF FLY ASH FOR PORTLAND CEMENT IS PROHIBITED. 1.5# lbs. OF COLLATED, FIBRILLATED, POLYPROPYLENE CLOTH FIBERS 3.00 TO 6.75 INCHES IN LENGTH SHALL BE ADDED TO EACH CUBIC YARD OF CONCRETE USED FOR SIDEWALKS. THE FIBERS SHALL BE AS MANUFACTURED UNDER THE NAME "FIBERMESH" OR EQUAL.

   B. CONCRETE CURB AND/OR COMBINATION CURB AND GUTTER SHALL BE OF THE TYPE SHOWN ON THE PLANS. THE CONTRACTOR IS CAUTIONED TO REFER TO THE CONSTRUCTION STANDARDS AND THE PAVEMENT CROSS-SECTION TO DETERMINE THE GUTTER FLAG THICKNESS AND THE AGGREGATE BASE COURSE THICKNESS BENEATH THE CURB AND GUTTER. CONTRACTION OR DUMMY JOINTS, WITH TWO 3/4" X 14" EPOXY COATED STEEL DOWEL BARS, SHALL BE INSTALLED AT SIXTY (60) FOOT INTERVALS AND AT ALL PCR'S, PT'S AND CURB RETURNS. ALTERNATE ENDS OF THE DOWEL BARS SHALL BE GREASED AND FITTED WITH METAL CAPS. EMPLACEMENT OF CONTRACTION JOINTS SHALL BE PROVIDED AT NO GREATER THAN FIFTEEN (15) FOOT INTERVALS BETWEEN EXPANSION JOINTS. NO MONEY-CONSING OF THE CURB AND GUTTER WILL BE ACCEPTED.

   C. CURBS SHALL BE DEPRESSED AT LOCATIONS WHERE PUBLIC WALKS/PEDESTRIAN PATHS INTERSECT CURB LINES, AND OTHER LOCATIONS AS DIRECTED. FOR THE PURPOSE OF PROVIDING ACCESSIBILITY, (SEE CONSTRUCTION STANDARDS FOR DETAIL). BARRIER CURB SHALL ALSO BE DEPRESSED AT DRIVEWAY LOCATIONS.

   D. THE CURBS SHALL BE BACKFILLED AFTER THEIR CONSTRUCTION AND PRIOR TO THE PLACEMENT OF THE BASE COURSE. THE CONCRETE MUST CURE FOR AT LEAST SEVEN DAYS BEFORE THE CURBS ARE BACKFILLED.

   E. CONCRETE SIDEWALK SHALL BE IN ACCORDANCE WITH THE ABOVE AND THE PLANS. PROVIDE SCORED JOINTS AT 5 FOOT INTERVALS AND 1/2" PREMOLDED FINCK EXPANSION JOINTS AT 30 FOOT INTERVALS, AND ADJACENT TO CONCRETE CURBS, DRIVEWAYS, FOUNDATIONS, ETC.

   F. CONCRETE DRIVEWAY APRONS SHALL BE IN ACCORDANCE WITH THE ABOVE AND THE PLANS. PROVIDE 6" X 6" NO. 6 WELDED WIRE MESH IN DRIVEWAYS. PROVIDE 1/2" PREMOLDED FIBER EXPANSION JOINT ADJACENT TO CURBS AND CONCRETE SIDEWALKS. PROVIDE SAWED OR FORMED CONTRACTION JOINT AT MID-POINT AND 5 FOOT MAXIMUM.

   G. STANDARD REINFORCED CONCRETE PAVEMENT SHALL BE IN ACCORDANCE WITH THE ABOVE AND THE PLANS. SAWED OR FORMED CONTRACTION EXPANSION JOINTS SHALL BE AS SHOWN ON THE PLANS.

   H. CONCRETE CURING AND PROTECTION SHALL BE IN ACCORDANCE WITH (SSRBC) - METHOD I, II, OR III.

   I. THE COST OF AGGREGATE BASE OR SUB-BASE UNDER CONCRETE WORK SHALL BE INCLUDED IN THE COST OF THE RESPECTIVE CONCRETE ITEM.

4. FLEXIBLE PAVEMENT

   A. THE PAVEMENT MATERIALS FOR BITUMINOUS STREETS, PARKING LOTS, DRIVEWAYS, SIDEWALKS AND PATHS SHALL BE AS DETAILED ON THE PLANS. UNLESS OTHERWISE SHOWN ON THE PLANS, THE FLEXIBLE PAVEMENTS SHALL CONSIST OF AGGREGATE BASE COURSE, TYPE B; BITUMINOUS CONCRETE BINDER COURSE; AND BITUMINOUS CONCRETE SURFACE COURSE; OF THE THICKNESS AND MATERIALS SPECIFIED ON THE PLANS. THICKNESSES SPECIFIED SHALL BE CONSIDERED TO BE THE MINIMUM COMPACTED THICKNESS. THE PAVING IS TO BE DONE IN ACCORD WITH THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION IN ILLINOIS.

   B. ALL BITUMINOUS SHALL BE KEPT OFF THE COMPLETED AGGREGATE BASE UNTIL THE BINDER COURSE IS LAID. THE AGGREGATE BASE SHALL BE UNIFORMLY PRIME COATED AT A RATE OF 0.4 TO 0.5 GALLONS PER SQUARE YARD PRIOR TO PLACING THE BINDER COURSE. PRIME COAT MATERIALS SHALL BE BITUMINOUS M.C. - 30.

   C. PRIOR TO PLACEMENT OF THE SURFACE COURSE, THE BINDER COURSE SHALL BE CLEANED, AND TACK COATED BY JUDY OF CURTY. ALL DAMAGED AREAS IN THE BINDER, BASE OR CURB SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER PRIOR TO LAYING THE SURFACE COURSE. THE CONTRACTOR SHALL PROVIDE WHATEVER EQUIPMENT AND MANPOWER NECESSARY, INCLUDING THE USE OF POWER BROOMS IF REQUIRED BY THE OWNER, TO PREPARE THE PAVEMENT FOR APPLICATION OF THE SURFACE COURSE. THE TACK COAT SHALL BE UNIFORMLY APPLIED TO THE BINDER COURSE AT A RATE OF 0.05 TO 0.10 GALLONS PER SQUARE YARD. TACK COAT SHALL BE AS SPECIFIED IN (SSRBC) SECTION 406.02.

   D. SEAMS IN BASE, BINDER AND SURFACE COURSE SHALL BE STAGGERED A MINIMUM OF 5'.

   E. FOR NEW STREETS, THE CONTRACTOR SHALL PERMIT THE BITUMINOUS CONCRETE BINDER COURSE TO WEATHER ONE (1) WINTER SEASON PRIOR TO THE INSTALLATION OF THE BITUMINOUS CONCRETE SURFACE COURSE UNLESS OTHERWISE SPECIFIED BY THE MUNICIPAL ENGINEER OR OWNER.

5. TESTING AND FINAL ACCEPTANCE

   A. THE CONTRACTOR SHALL FOLLOW THE QUALITY CONTROL TESTING PROGRAM FOR CONCRETE AND PAVEMENT MATERIALS ESTABLISHED BY THE OWNER AND/OR MUNICIPALITY. TESTING SHALL BE DONE IN ACCORD WITH THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION IN ILLINOIS AND THE TESTING REQUIREMENTS OF THE MUNICIPALITY.

   B. WHEN REQUESTED BY THE OWNER, TEST RESULTS AND DOCUMENTATION FOR THE CONCRETE, BASE COURSE, BITUMINOUS CONCRETE BINDER, AND/OR SURFACE COURSE, SHALL BE SUBMITTED FOR VERIFICATION.

   C. PRIOR TO PLACEMENT OF THE BITUMINOUS CONCRETE SURFACE COURSE, THE CONTRACTOR, WHEN REQUIRED BY THE OWNER OR MUNICIPALITY, SHALL OBTAIN SPECIMENS OF THE BINDER COURSE WITH A CORE DRILL WHERE DIRECTED, FOR THE PURPOSE OF THICKNESS VERIFICATION.

   D. WHEN REQUIRED BY THE OWNER OR MUNICIPALITY, THE CONTRACTOR SHALL OBTAIN SPECIMENS OF THE FULL DEPTH BITUMINOUS CONCRETE PAVEMENT STRUCTURE WITH A CORE DRILL WHERE DIRECTED, IN ORDER TO CONFIRM THE PLAN THICKNESS. DEFICIENCIES IN THICKNESS SHALL BE ADJUSTED FOR BY THE METHOD DESCRIBED IN (SSRBC), ART. 407.13.

   E. FINAL ACCEPTANCE OF THE TOTAL PAVEMENT INSTALLATION SHALL BE SUBJECT TO THE TESTING AND CHECKING REQUIREMENTS CITED ABOVE.

## SANITARY SEWER NOTES

1. GENERAL

   A. SANITARY SEWER PIPE SHALL BE PVC (POLYVINYL CHLORIDE) PLASTIC PIPE WITH A STANDARD DIMENSION RATIO (SDR) OF 26 CONFORMING TO ASTM D-3034 WITH PUSH-ON JOINTS CONFORMING TO ASTM D-3212 AND PVC (POLYVINYL CHLORIDE) PLASTIC PIPE WITH A STANDARD DIMENSION RATIO (SDR) OF 21 CONFORMING TO ASTM D-2241 WITH PUSH-ON JOINTS CONFORMING TO ASTM D-3139 AS SHOWN ON THE PLANS. PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE PER LINEAL FOOT OF SANITARY SEWER COMPLETE IN PLACE.

   B. SANITARY SEWER PIPE 15" AND LARGER, WHERE NOTED ON THE PLANS, OR WHERE THE IEPA MINIMUM SEPARATION CANNOT BE MAINTAINED, SHALL BE ONE OF THE FOLLOWING:

      PLAN CODE DESCRIPTION

      DIP: DUCTILE IRON WATERMAIN QUALITY PIPE, CLASS 52, (ANSI A-21.51) WITH MECHANICAL OR O-RING GASKETED JOINTS (ANSI A-21.11).

      PVC: PRESSURE RATED PVC PIPE MEETING ASTM D-2241 WITH ASTM D-3139 GASKETED JOINT, SDR 26

   C. "BAND-SEAL" OR SIMILAR FLEXIBLE TYPE COUPLINGS SHALL BE USED WHEN CONNECTING SEWER PIPES OF DISSIMILAR MATERIALS. "BAND-SEAL", "FERNCO", AND "MISSION" TYPE COUPLINGS SHALL NOT BE USED ON ANY SEWER MAIN.

   D. ALL SANITARY SEWERS ARE TO BE CONSTRUCTED USING A LASER INSTRUMENT TO MAINTAIN LINE AND GRADE.

   E. ALL FLOOR DRAINS SHALL CONNECT TO THE SANITARY SEWER.

   F. CONNECTIONS TO EXISTING SANITARY SEWER SYSTEM SHALL NOT BE DONE UNTIL AUTHORIZED BY THE MUNICIPALITY.

   G. WATERMAINS SHALL BE SEPARATED FROM SANITARY SEWERS AND STORM SEWERS IN ACCORDANCE WITH IEPA REQUIREMENTS AS SPECIFIED IN "WATER MAIN" SECTION.

   H. NO WATER LINE SHALL BE PLACED IN THE SAME TRENCH AS A SEWER LINE EXCEPT UNDER SPECIAL CIRCUMSTANCES AND THEN ONLY UNDER THE FOLLOWING RULES:

      a) PERMISSION SHALL BE OBTAINED FROM THE MUNICIPAL ENGINEERING DEPARTMENT IN WRITING PRIOR TO BEGINNING CONSTRUCTION.
      b) THE BOTTOM OF A WATER LINE SHALL BE INSTALLED ON A SHELF A MINIMUM OF 18" ABOVE THE TOP OF THE SEWER AND 18" HORIZONTALLY AWAY FROM THE EDGE OF THE SEWER.

2. BEDDING:

   A. BEDDING SHALL CONSIST OF A MINIMUM OF FOUR (4") INCHES OF COMPACTED CRUSHED GRAVEL OR STONE, 1/4" -3/4" IN SIZE. THE SEWER SHALL HAVE MECHANICALLY TAMPED CRUSHED GRAVEL OR STONE COVER ABOVE THE TOP OF THE PIPE TO A MINIMUM OF TWELVE (12") INCHES FOR PVC PIPE AND TO THE SPRING LINE FOR DIP. THE BEDDING AND COVER MATERIAL SHALL BE ASTM D-2321 CLASS I FOR PVC PIPE AND ASTM D426 CLASS 67 FOR DIP PIPE. THE COST OF THE BEDDING AND COVER SHALL BE INCLUDED WITH THE UNIT PRICE BID FOR THE SEWER.

   B. ALL UNSUITABLE MATERIAL SHALL BE REMOVED BELOW THE PROPOSED SANITARY SEWER AND REPLACED WITH COMPACTED CA6 CRUSHED GRAVEL OR STONE.

   C. ALL TRENCHES BENEATH PROPOSED OR EXISTING UTILITIES, PAVEMENTS, ROADWAYS, SIDEWALKS, AND FOR A DISTANCE OF FIVE (5') FEET ON EITHER SIDE OF SAME, AND/OR WHERE SHOWN ON THE PLANS, SHALL BE BACKFILLED WITH SELECT GRANULAR BACKFILL (CA-6) AND THOROUGHLY MECHANICALLY COMPACTED IN 9" THICK (LOOSE MEASUREMENT) LAYERS, JETTING WITH WATER IS NOT PERMITTED. REFER TO THE TRENCH BACKFILL LIMITS DETAIL.

3. MANHOLES:

   A. SANITARY SEWER MANHOLES SHALL BE 4'-0" I.D. PRECAST CONCRETE SECTIONS CONFORMING TO ASTM D-478 WITH PREFORMED BITUMINOUS OR "O" RING JOINTS, IN ACCORDANCE WITH MUNICIPAL REGULATIONS, AND HAVE AN ECCENTRIC CONE INSTALLED TO LINE UP WITH THE MANHOLE STEPS. ALL MANHOLE STEPS SHALL BE AT 16" O.C. SIMILAR TO NEENAH R-1980.

   B. ALL PIPE CONNECTION OPENINGS SHALL BE PRECAST WITH RESILIENT RUBBER WATER TIGHT SLEEVES. THE BOTTOM OF MANHOLE SHALL HAVE A CONCRETE BENCH POURED TO FACILITATE SMOOTH FLOWS.

4. FRAMES AND LIDS:

   A. ALL SANITARY SEWER MANHOLE FRAMES AND LIDS SHALL BE NEENAH R-1712 UNLESS OTHERWISE NOTED ON THE PLANS. THE LIDS SHALL HAVE RECESSED CHECKERED PICK HOLES AND BE SELF SEALING WITH AN "O" RING GASKET. THE LIDS SHALL HAVE THE WORDS "SANITARY" EMBOSSED ON THE SURFACE. THE JOINTS BETWEEN FRAME AND CONCRETE SECTION SHALL BE SEALED WITH A BUTYL ROPE.

   B. A MAXIMUM OF EIGHT (8) INCHES OF CONCRETE ADJUSTING RINGS SHALL BE USED TO ADJUST FRAME ELEVATIONS. RINGS SHALL BE SEALED TOGETHER WITH BUTYL ROPE.

5. DROP MANHOLE ASSEMBLIES:

   A. DROP MANHOLE ASSEMBLIES: DROP MANHOLE ASSEMBLIES SHALL BE PROVIDED AT THE JUNCTION OF SANITARY SEWERS WHERE THE DIFFERENCE IN INVERT GRADES EXCEEDS TWO FEET (2'), OR AS SHOWN ON THE PLANS. THE ENTIRE DROP ASSEMBLY SHALL BE CAST IN CONCRETE MONOLITHICALLY WITH THE MANHOLE BARREL SECTION.

6. CLEANING:

   A. ALL MANHOLES AND PIPES SHALL BE THOROUGHLY CLEANED OF DIRT AND DEBRIS, AND ALL VISIBLE LEAKAGE ELIMINATED, BEFORE FINAL INSPECTION AND ACCEPTANCE.

7. TESTING:

   A. DEFLECTION AND LEAKAGE TESTING WILL BE REQUIRED. THE PROCEDURE AND ALLOWABLE TESTING LIMITS SHALL BE AS SPECIFIED IN THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER CONSTRUCTION IN ILLINOIS", OR MUNICIPAL CODES. IN THE EVENT OF A DISCREPANCY BETWEEN THE STANDARD SPECIFICATIONS AND THE MUNICIPAL CODE, THE MUNICIPAL CODE SHALL GOVERN. THE FULL LENGTH OF THE SANITARY SEWER IS REQUIRED TO BE BOTH AIR TESTED AND DEFLECTION TESTED.

   B. TESTING THE ALIGNMENT/STRAIGHTNESS SHALL BE IN ACCORDANCE WITH MUNICIPAL CODE.

   C. TESTING OF MANHOLES TO BE IN ACCORDANCE WITH ASTM C-969.

8. TELEVISING:

   A. ALL SANITARY SEWERS SHALL BE TELEVISED AND A COPY OF THE TAPE/DVD AND A WRITTEN REPORT SHALL BE SUBMITTED AND REVIEWED BY THE OWNER OR MUNICIPALITY BEFORE FINAL ACCEPTANCE. THE REPORT SHALL INCLUDE STUB LOCATION AS WELL AS A DESCRIPTION OF ALL DEFECTS, WATER LEVEL, LEAKS AND LENGTHS. IDENTIFY MANHOLE TO MANHOLE BOTH VERBALLY AND ON-SCREEN USING MANHOLE NUMBERS FROM APPROVED PLANS. ORDER OF WRITTEN REPORT SHALL BE THE SAME AS THE VIDEO TAPE/DVDS.

9. TEST RESULTS:

   A. IF THE SANITARY SEWER

A. REFERENCED SPECIFICATIONS

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE FOLLOWING, EXCEPT AS MODIFIED HEREIN OR ON THE PLANS:
   - STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION), BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION (IDOT SS) FOR ALL IMPROVEMENTS EXCEPT SANITARY SEWER AND WATER MAIN CONSTRUCTION;
   - STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS, LATEST EDITION (SSWS) FOR SANITARY SEWER AND WATER MAIN CONSTRUCTION;
   - VILLAGE OF _____ MUNICIPAL CODE;
   - THE METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO (MWRD) WATERSHED MANAGEMENT ORDINANCE AND TECHNICAL GUIDANCE MANUAL;
   - IN CASE OF CONFLICT BETWEEN THE APPLICABLE ORDINANCES NOTED, THE MORE STRINGENT SHALL TAKE PRECEDENCE AND SHALL CONTROL ALL CONSTRUCTION.

B. NOTIFICATIONS:

1. THE MWRD LOCAL SEWER SYSTEMS SECTION FIELD OFFICE MUST BE NOTIFIED AT LEAST TWO (2) WORKING DAYS PRIOR TO THE COMMENCEMENT OF ANY WORK (CALL 708-588-4055).
2. THE VILLAGE OF _____ ENGINEERING DEPARTMENT AND PUBLIC MUST BE NOTIFIED AT LEAST 24 HOURS PRIOR TO THE START OF CONSTRUCTION AND PRIOR TO EACH PHASE OF WORK. CONTRACTOR SHALL DETERMINE ITEMS REQUIRING INSPECTION PRIOR TO START OF CONSTRUCTION OR EACH WORK PHASE.
3. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO BEGINNING CONSTRUCTION FOR THE EXACT LOCATIONS OF UTILITIES AND FOR THEIR PROTECTION DURING CONSTRUCTION. IF EXISTING UTILITIES ARE ENCOUNTERED THAT CONFLICT IN LOCATION WITH NEW CONSTRUCTION, IMMEDIATELY NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED. CALL J.U.L.I.E. AT 1-800-892-0123.

C. GENERAL NOTES

1. ALL ELEVATIONS SHOWN ON PLANS REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). CONVERSION FACTOR IS _____ FT.
2. MWRD, THE MUNICIPALITY AND THE OWNER OR OWNER'S REPRESENTATIVE SHALL HAVE THE AUTHORITY TO INSPECT, APPROVE, AND REJECT THE CONSTRUCTION IMPROVEMENTS.
3. THE CONTRACTOR(S) SHALL INDEMNIFY THE OWNER, ENGINEER, MUNICIPALITY, MWRD, AND THEIR AGENTS, ETC., FROM ALL LIABILITY INVOLVED WITH THE CONSTRUCTION, INSTALLATION, OR TESTING OF THIS WORK ON THE PROJECT.
4. THE PROPOSED IMPROVEMENTS MUST BE CONSTRUCTED IN ACCORDANCE WITH THE ENGINEERING PLANS AS APPROVED BY MWRD AND THE MUNICIPALITY UNLESS CHANGES ARE APPROVED BY MWRD, THE MUNICIPALITY, OR AUTHORIZED AGENT. THE CONSTRUCTION DETAILS, AS PRESENTED ON THE PLANS, MUST BE FOLLOWED. PROPER CONSTRUCTION TECHNIQUES MUST BE FOLLOWED ON THE IMPROVEMENTS INDICATED ON THE PLANS.
5. THE LOCATION OF VARIOUS UNDERGROUND UTILITIES WHICH ARE SHOWN ON THE PLANS ARE FOR INFORMATION ONLY AND REPRESENT THE BEST KNOWLEDGE OF THE ENGINEER. VERIFY LOCATIONS AND ELEVATIONS PRIOR TO BEGINNING THE CONSTRUCTION OPERATIONS.
6. ANY EXISTING PAVEMENT, SIDEWALK, DRIVEWAY, ETC., DAMAGED DURING CONSTRUCTION OPERATIONS AND NOT CALLED FOR TO BE REMOVED SHALL BE REPLACED AT THE EXPENSE OF THE CONTRACTOR.
7. MATERIAL AND COMPACTION TESTING SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE MUNICIPALITY, MWRD, AND OWNER.
8. THE UNDERGROUND CONTRACTOR SHALL MAKE ALL NECESSARY ARRANGEMENTS TO NOTIFY ALL INSPECTION AGENCIES.
9. ALL NEW AND EXISTING UTILITY STRUCTURES ON SITE AND IN AREAS DISTURBED DURING CONSTRUCTION SHALL BE ADJUSTED TO FINISH GRADE PRIOR TO FINAL INSPECTION.
10. RECORD DRAWINGS SHALL BE KEPT BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER AS SOON AS UNDERGROUND IMPROVEMENTS ARE COMPLETED. FINAL PAYMENTS TO THE CONTRACTOR SHALL BE HELD UNTIL THEY ARE RECEIVED. ANY CHANGES IN LENGTH, LOCATION OR ALIGNMENT SHALL BE SHOWN IN RED. ALL WYES OR BENDS SHALL BE LOCATED FROM THE DOWNSTREAM MANHOLE. ALL VALVES, B-BOXES, TEES OR BENDS SHALL BE TIED TO A FIRE HYDRANT.

D. SANITARY SEWER

1. THE CONTRACTOR SHALL TAKE MEASURES TO PREVENT ANY POLLUTED WATER, SUCH AS GROUND AND SURFACE WATER, FROM ENTERING THE EXISTING SANITARY SEWERS.
2. A WATER-TIGHT PLUG SHALL BE INSTALLED IN THE DOWNSTREAM SEWER PIPE AT THE POINT OF SEWER CONNECTION PRIOR TO COMMENCING ANY SEWER CONSTRUCTION. THE PLUG SHALL REMAIN IN PLACE UNTIL REMOVAL IS AUTHORIZED BY THE MUNICIPALITY AND/OR MWRD AFTER THE SEWERS HAVE BEEN TESTED AND ACCEPTED.
3. DISCHARGING ANY UNPOLLUTED WATER INTO THE SANITARY SEWER SYSTEM FOR THE PURPOSE OF SEWER FLUSHING OF LINES FOR THE DEFLECTION TEST SHALL BE PROHIBITED WITHOUT PRIOR APPROVAL FROM THE MUNICIPALITY OR MWRD.
4. ALL SANITARY SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS (LATEST EDITION).
5. ALL FLOOR DRAINS SHALL DISCHARGE TO THE SANITARY SEWER SYSTEM.
6. ALL DOWNSPOUTS AND FOOTING DRAINS SHALL DISCHARGE TO THE STORM SEWER SYSTEM.
7. ALL SANITARY SEWER PIPE MATERIALS AND JOINTS (AND STORM SEWER PIPE MATERIALS AND JOINTS IN A COMBINED SEWER AREA) SHALL CONFORM TO THE FOLLOWING:

| PIPE MATERIAL | PIPE SPECIFICATIONS | JOINT SPECIFICATIONS |
|---|---|---|
| VITRIFIED CLAY PIPE | ASTM C-700 | ASTM C-425 |
| REINFORCED CONCRETE SEWER PIPE | ASTM C-76 | ASTM C-443 |
| CAST IRON SOIL PIPE | ASTM A-74 | ASTM C-564 |
| DUCTILE IRON PIPE | ANSI A21.51 | ANSI A21.11 |
| POLYVINYL CHLORIDE (PVC) PIPE<br>6-INCH TO 15-INCH DIAMETER SDR 26<br>18-INCH TO 27-INCH DIAMETER F/DY=46 | ASTM D-3034<br>ASTM F-679 | ASTM D-3212<br>ASTM D-3212 |
| HIGH DENSITY POLYETHYLENE (HDPE) | ASTM D-3350<br>ASTM D-3035 | ASTM D-3261,F-2620 (HEAT FUSION)<br>ASTM D-3212,F-477 (GASKETED) |
| WATER MAIN QUALITY PVC<br>4-INCH TO 36-INCH<br>4-INCH TO 12-INCH<br>14-INCH TO 48-INCH | ASTM D-2241<br>AWWA C900<br>AWWA C905 | ASTM D-3139<br>ASTM D-3139<br>ASTM D-3139 |

THE FOLLOWING MATERIALS ARE ALLOWED ON A QUALIFIED BASIS SUBJECT TO DISTRICT REVIEW AND APPROVAL PRIOR TO PERMIT ISSUANCE. A SPECIAL CONDITION WILL BE ADDED TO THE PERMIT WHEN THE PIPE MATERIAL BELOW IS USED FOR SEWER CONSTRUCTION OR A CONNECTION IS MADE.

| PIPE MATERIAL | PIPE SPECIFICATIONS | JOINT SPECIFICATIONS |
|---|---|---|
| POLYPROPYLENE (PP) PIPE | | |
| 12-INCH TO 24-INCH DOUBLE WALL | ASTM F-2736 | D-3212, F-477 |
| 30-INCH TO 60-INCH TRIPLE WALL | ASTM F-2764 | D3212, F-477 |

8. ALL SANITARY SEWER CONSTRUCTION (AND STORM SEWER CONSTRUCTION IN COMBINED SEWER AREAS), REQUIRES STONE BEDDING WITH STONE #4 " TO 1" IN SIZE, WITH MINIMUM BEDDING THICKNESS EQUAL TO ¼ THE OUTSIDE DIAMETER OF THE SEWER PIPE, BUT NOT LESS THAN FOUR (4) INCHES NOR MORE THAN EIGHT (8) INCHES. MATERIAL SHALL BE CA-7, CA-11 OR CA-13 AND SHALL BE EXTENDED AT LEAST 12" ABOVE THE TOP OF THE PIPE WHEN USING PVC.
9. NON-SHEAR FLEXIBLE-TYPE COUPLINGS SHALL BE USED IN THE CONNECTION OF SEWER PIPES OF DISSIMILAR PIPE MATERIALS.
10. ALL MANHOLES SHALL BE PROVIDED WITH BOLTED, WATERTIGHT COVERS. SANITARY LIDS SHALL BE CONSTRUCTED WITH A CONCEALED PICKHOLE AND WATERTIGHT GASKET WITH THE WORD "SANITARY" CAST INTO THE LID.
11. WHEN CONNECTING TO AN EXISTING SEWER MAIN BY MEANS OTHER THAN AN EXISTING WYE, TEE, OR AN EXISTING MANHOLE, ONE OF THE FOLLOWING METHODS SHALL BE USED:
    a) A CIRCULAR SAW-CUT OF SEWER MAIN BY PROPER TOOLS ("SEWER-TAP" MACHINE OR SIMILAR) AND PROPER INSTALLATION OF HUBWYE SADDLE OR HUB-TEE SADDLE.
    b) REMOVE AN ENTIRE SECTION OF PIPE (BREAKING ONLY THE TOP OF ONE BELL) AND REPLACE WITH A WYE OR TEE BRANCH SECTION.
    c) WITH PIPE CUTTER, NEATLY AND ACCURATELY CUT OUT DESIRED LENGTH OF PIPE FOR INSERTION OF PROPER FITTING, USING "BAND SEAL" OR SIMILAR COUPLINGS TO HOLD IT FIRMLY IN PLACE.
12. WHENEVER A SANITARY/COMBINED SEWER CROSSES UNDER A WATERMAIN, THE MINIMUM VERTICAL DISTANCE FROM THE TOP OF THE SEWER TO THE BOTTOM OF THE WATERMAIN SHALL BE 18 INCHES. FURTHERMORE, A MINIMUM HORIZONTAL DISTANCE OF 10 FEET BETWEEN SANITARY/COMBINED SEWERS AND WATERMAINS SHALL BE MAINTAINED UNLESS: THE SEWER IS LAID IN A SEPARATE TRENCH, KEEPING A MINIMUM 18" VERTICAL SEPARATION; OR THE SEWER IS LAID IN THE SAME TRENCH WITH THE WATERMAIN LOCATED AT THE OPPOSITE SIDE ON A BENCH OF UNDISTURBED EARTH, KEEPING A MINIMUM 18" VERTICAL SEPARATION. IF EITHER THE VERTICAL OR HORIZONTAL DISTANCES DESCRIBED CANNOT BE MAINTAINED, OR THE SEWER CROSSES ABOVE THE WATER MAIN, THE SEWER SHALL BE CONSTRUCTED TO WATER MAIN STANDARDS OR IT SHALL BE ENCASED WITH A WATER MAIN QUALITY CARRIER PIPE WITH THE ENDS SEALED.
13. ALL EXISTING SEPTIC SYSTEMS SHALL BE ABANDONED. ABANDONED TANKS SHALL BE FILLED WITH GRANULAR MATERIAL OR REMOVED.
14. ALL SANITARY MANHOLES, (AND STORM MANHOLES IN COMBINED SEWER AREAS), SHALL HAVE A MINIMUM INSIDE DIAMETER OF 48 INCHES, AND SHALL BE CAST IN PLACE OR PRE-CAST REINFORCED CONCRETE.
15. ALL SANITARY MANHOLES, (AND STORM MANHOLES IN COMBINED SEWER AREAS), SHALL HAVE PRECAST "RUBBER BOOTS" THAT CONFORM TO ASTM C-923 FOR ALL PIPE CONNECTIONS. PRECAST SECTIONS SHALL CONSIST OF MODIFIED GROOVE TONGUE AND RUBBER GASKET TYPE JOINTS.
16. ALL ABANDONED SANITARY SEWERS SHALL BE PLUGGED AT BOTH ENDS WITH AT LEAST 2 FEET LONG NON-SHRINK CONCRETE OR MORTAR PLUG.
17. EXCEPT FOR FOUNDATION/FOOTING DRAINS PROVIDED TO PROTECT BUILDINGS, OR PERFORATED PIPES ASSOCIATED WITH VOLUME CONTROL FACILITIES, DRAIN TILES/FIELD TILES/UNDERDRAINS/PERFORATED PIPES ARE NOT ALLOWED TO BE CONNECTED TO OR TRIBUTARY TO COMBINED SEWERS, SANITARY SEWERS, OR STORM SEWERS TRIBUTARY TO COMBINED SEWERS IN COMBINED SEWER AREAS. CONSTRUCTION OF NEW FACILITIES OF THIS TYPE IS PROHIBITED; AND ALL EXISTING DRAIN TILES AND PERFORATED PIPES ENCOUNTERED WITHIN THE PROJECT AREA SHALL BE PLUGGED OR REMOVED, AND SHALL NOT BE CONNECTED TO COMBINED SEWERS, SANITARY SEWERS, OR STORM SEWERS TRIBUTARY TO COMBINED SEWERS.
18. A BACKFLOW PREVENTER IS REQUIRED FOR ALL DETENTION BASINS TRIBUTARY TO COMBINED SEWERS. REQUIRED BACKFLOW PREVENTERS SHALL BE INSPECTED AND EXERCISED ANNUALLY BY THE PROPERTY OWNER TO ENSURE PROPER OPERATION, AND ANY NECESSARY MAINTENANCES SHALL BE PERFORMED TO ENSURE FUNCTIONALITY. IN THE EVENT OF A SEWER SURCHARGE INTO AN OPEN DETENTION BASIN TRIBUTARY TO COMBINED SEWERS, THE PERMITTEE SHALL ENSURE THAT CLEAN UP AND WASH OUT OF SEWAGE TAKES PLACE WITHIN 48 HOURS OF THE STORM EVENT.

E. EROSION AND SEDIMENT CONTROL

1. THE CONTRACTOR SHALL INSTALL THE EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
2. EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE FUNCTIONAL PRIOR TO HYDROLOGIC DISTURBANCE OF THE SITE.
3. ALL DESIGN CRITERIA, SPECIFICATIONS, AND INSTALLATION OF EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE IN ACCORDANCE WITH THE ILLINOIS URBAN MANUAL.
4. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
5. INSPECTIONS AND DOCUMENTATION SHALL BE PERFORMED, AT A MINIMUM:
   a) UPON COMPLETION OF INITIAL EROSION AND SEDIMENT CONTROL MEASURES, PRIOR TO ANY SOIL DISTURBANCE.
   b) ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM EVENT WITH GREATER THAN 0.5 INCH OF RAINFALL OR LIQUID EQUIVALENT PRECIPITATION.
6. SOIL DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER AS TO MINIMIZE EROSION. IF STRIPPING, CLEARING, GRADING, OR LANDSCAPING ARE TO BE DONE IN PHASES, THE CO-PERMITTEE SHALL PLAN FOR APPROPRIATE SOIL EROSION AND SEDIMENT CONTROL MEASURES.
7. A STABILIZED MAT OF CRUSHED STONE MEETING THE STANDARDS OF THE ILLINOIS URBAN MANUAL SHALL BE INSTALLED AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE. SEDIMENT OR SOIL REACHING AN IMPROVED PUBLIC RIGHT-OF-WAY, STREET, ALLEY OR PARKING AREA SHALL BE REMOVED BY SCRAPING OR STREET CLEANING AS ACCUMULATIONS WARRANT AND TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA.
8. CONCRETE WASHOUT FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE ILLINOIS URBAN MANUAL AND SHALL BE INSTALLED PRIOR TO ANY ON SITE CONSTRUCTION ACTIVITIES INVOLVING CONCRETE.
9. MORTAR WASHOUT FACILITIES SHALL BE CONSTRUCTED IN ADDITION TO CONCRETE WASHOUT FACILITIES FOR ANY BRICK AND MORTAR BUILDING ENVELOPE CONSTRUCTION ACTIVITIES.
10. TEMPORARY DIVERSIONS SHALL BE CONSTRUCTED AS NECESSARY TO DIRECT ALL RUNOFF FROM HYDROLOGICALLY DISTURBED AREAS TO AN APPROPRIATE SEDIMENT TRAP OR BASIN. VOLUME CONTROL FACILITIES SHALL NOT BE USED AS TEMPORARY SEDIMENT BASINS.
11. DISTURBED AREAS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT MEASURES WITHIN SEVEN (7) DAYS.
12. ALL FLOOD PROTECTION AREAS AND VOLUME CONTROL FACILITIES SHALL, AT A MINIMUM, BE PROTECTED WITH A DOUBLE-ROW OF SILT FENCE (OR EQUIVALENT).
13. VOLUME CONTROL FACILITIES SHALL NOT BE CONSTRUCTED UNTIL ALL OF THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.
14. SOIL STOCKPILES SHALL, AT A MINIMUM, BE PROTECTED WITH PERIMETER SEDIMENT CONTROLS. SOIL STOCKPILES SHALL NOT BE PLACED IN FLOOD PROTECTION AREAS OR THEIR BUFFERS.
15. EARTHEN EMBANKMENT SIDE SLOPES SHALL BE STABILIZED WITH APPROPRIATE EROSION CONTROL BLANKET.
16. STORM SEWERS THAT ARE OR WILL BE FUNCTIONING DURING CONSTRUCTION SHALL BE PROTECTED BY APPROPRIATE SEDIMENT CONTROL MEASURES.
17. THE CONTRACTOR SHALL EITHER REMOVE OR REPLACE ANY EXISTING DRAIN TILES AND INCORPORATE THEM INTO THE DRAINAGE PLAN FOR THE DEVELOPMENT. DRAIN TILES CANNOT BE TRIBUTARY TO A SANITARY OR COMBINED SEWER. DRAIN TILES ALLOWED IN COMBINED SEWER AREA FOR GREEN INFRASTRUCTURE PRACTICES.
18. IF DEWATERING SERVICES ARE USED, ADJOINING PROPERTIES AND DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION. DEWATERING SYSTEMS SHOULD BE INSPECTED DAILY DURING OPERATIONAL PERIODS. THE SITE INSPECTOR MUST BE PRESENT AT THE COMMENCEMENT OF DEWATERING ACTIVITIES.
19. THE CONTRCTOR SHALL BE RESPONSIBLE FOR TRENCH DEWATERING AND EXCAVATION FOR THE INSTALLATION OF SANITARY SEWERS, STORM SEWERS, WATERMAINS AS WELL AS THEIR SERVICES AND OTHER APPURTENANCES. ANY TRENCH DEWATERING, WHICH CONTAINS SEDIMENT SHALL PASS THROUGH A SEDIMENT SETTLING POND OR EQUALLY EFFECTIVE SEDIMENT CONTROL DEVICE. ALTERNATIVES MAY INCLUDE DEWATERING INTO A SUMP PIT, FILTER BAG OR EXISTING VEGETATED UPSLOPE AREA. SEDIMENT LADEN WATERS SHALL NOT BE DISCHARGE TO WATERWAYS, FLOOD PROTECTION AREAS OR THE COMBINED SEWER SYSTEM.
20. ALL PERMANENT EROSION CONTROL PRACTICES SHALL BE INITIATED WITHIN SEVEN (7) DAYS FOLLOWING THE COMPLETION OF SOIL DISTURBING ACTIVITIES.
21. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED AND REPAIRED AS NEEDED ON A YEAR-ROUND BASIS DURING CONSTRUCTION AND ANY PERIODS OF CONSTRUCTION SHUTDOWN UNTIL PERMANENT STABILIZATION IS ACHIEVED.
22. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN THIRTY (30) DAYS AFTER PERMANENT SITE STABILIZATION.
23. THE EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THE PLANS ARE THE MINIMUM REQUIREMENTS. ADDITIONAL MEASURES MAY BE REQUIRED, AS DIRECTED BY THE ENGINEER, SITE INSPECTOR, OR MWRD.

| NO. | DATE | REMARKS |
|---|---|---|
| 2 | 04/11/22 | REVISIONS PER ARCHITECT/OWNER |
| 1 | 03/22/22 | REVISIONS PER ARCHITECT |

SPECIFICATIONS - 2

2240-2296 RAND ROAD
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700
Rosemont, Illinois 60018
Phone: (847) 696-4980 Fax: (847) 696-4995
SPACECO INC.

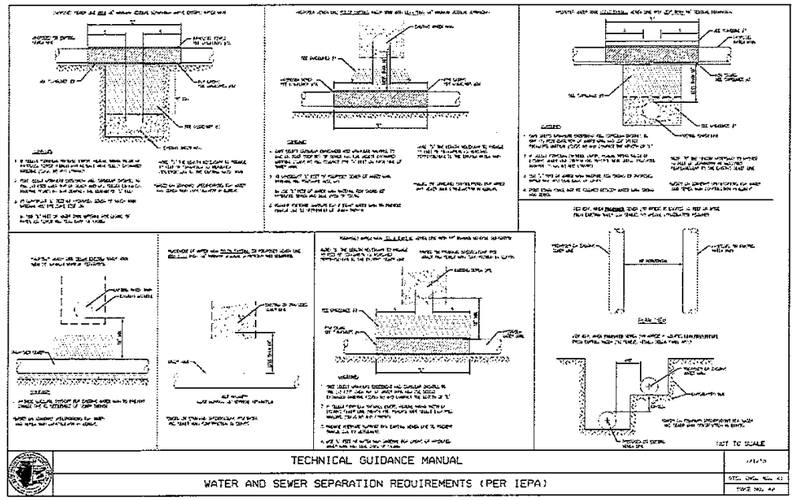
FILENAME: 11624SPEC2
DATE: 03/16/22
JOB NO. 11624
SHEET SP2
18 OF 18

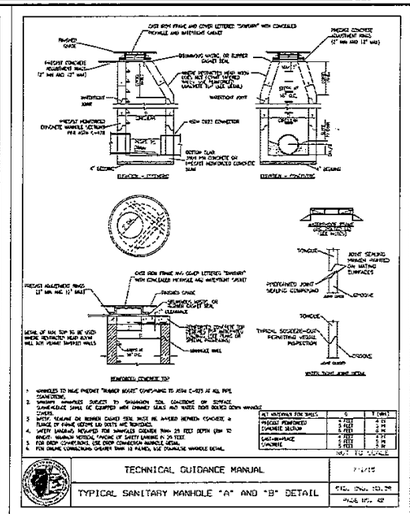
TECHNICAL GUIDANCE MANUAL

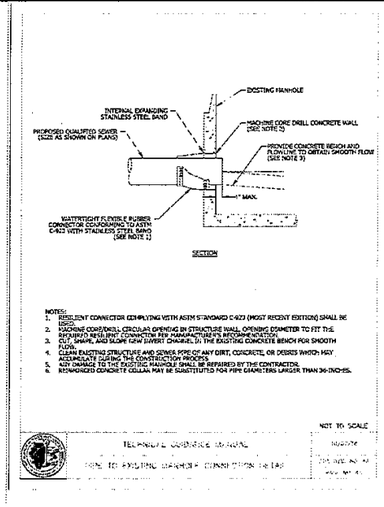
MWRD GENERAL NOTES

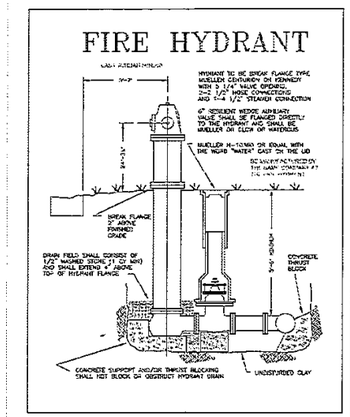
07/12/2016
STD. DWG. NO.18
PAGE NO. 19

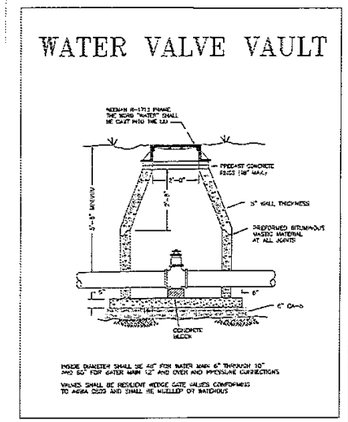
Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)

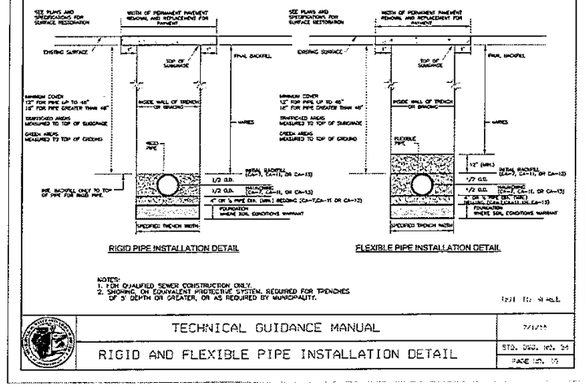


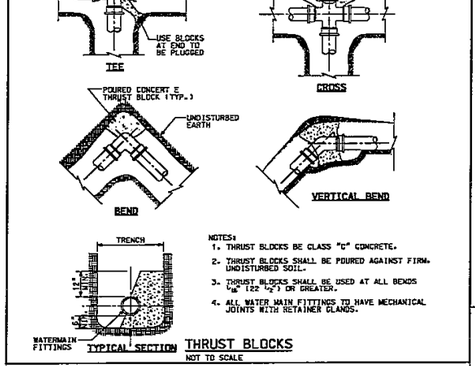



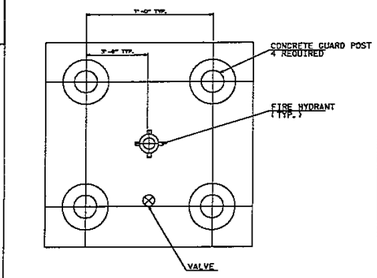




| NO. | DATE | REMARKS |
|---|---|---|
| 2 | 04/11/22 | REVISIONS PER ARCHITECT/OWNER |
| 1 | 02/22/22 | REVISIONS PER ARCHITECT |

DETAILS - 1

2240-2296 RAND ROAD
PALATINE, ILLINOIS

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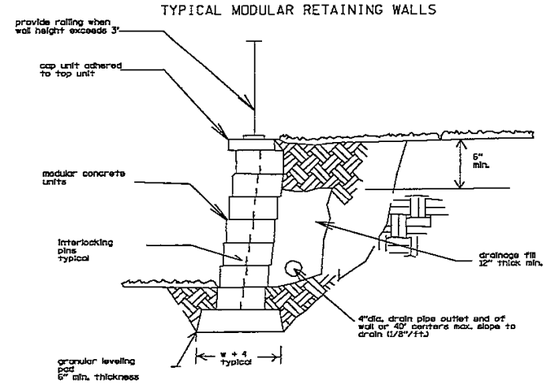
SPACECO INC.

FILENAME: 11624DET01
DATE: 03/18/22
JOB NO. 11624
SHEET D1
14 OF 18

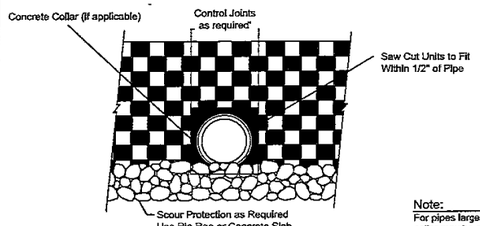
Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)

## TYPICAL MODULAR RETAINING WALLS



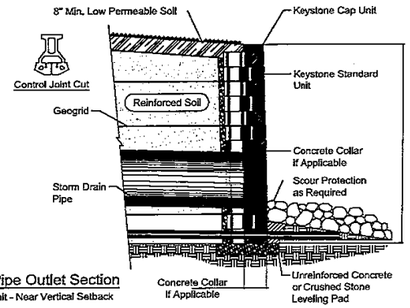

Notes:

1. All modular retaining walls are to be contructed per the manufacturers specifications.
2. The examples shown are to highlight typical components to be used in the design of walls. The contractor shall submit shop drawings of the proposed retaining walls for review and approval prior to installation.
3. Contractor shall submit structural calculations and plans prepared and sealed by a structural engineer for all retaining walls prior to construction.



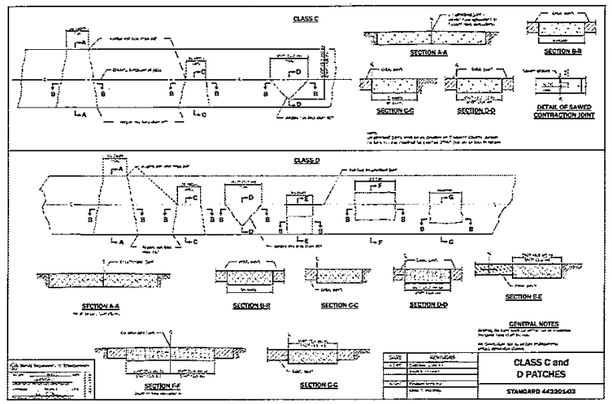

Note:
For pipes larger than 24", a concrete collar may be cast around pipe for ease of construction and appearance.

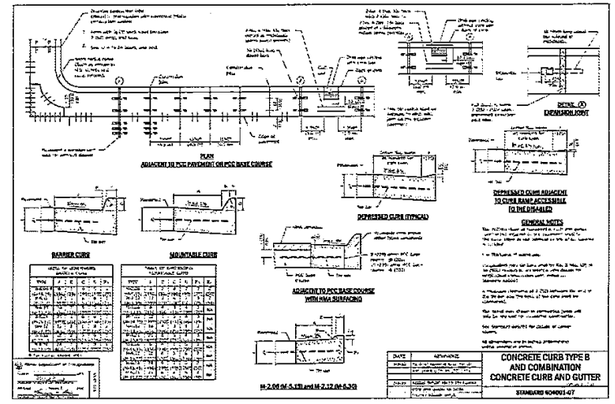
### Typical Pipe Outlet Detail

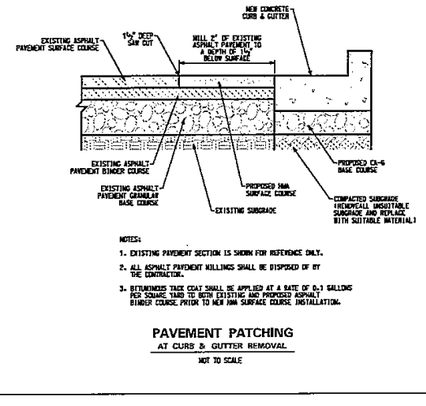



### Typical Pipe Outlet Section

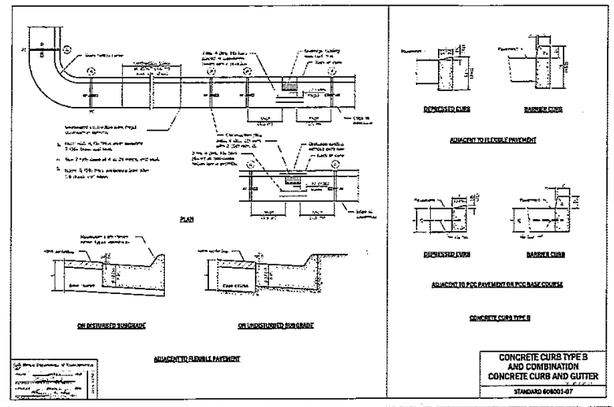
Standard Unit - Near Vertical Setback

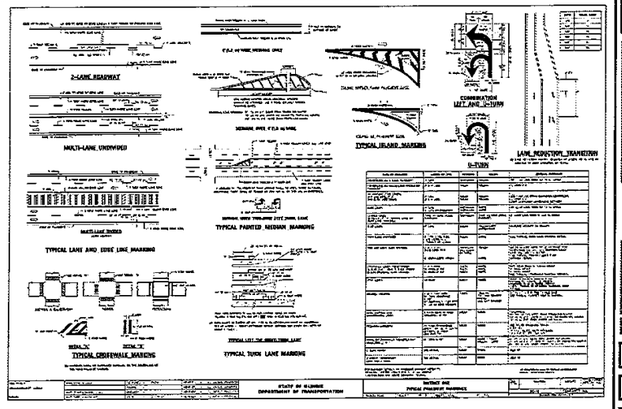



### PAVEMENT PATCHING
AT CURB & GUTTER REMOVAL
NOT TO SCALE




| NO. | DATE | REMARKS |
|---|---|---|
| 2 | 04/11/22 | REVISIONS PER ARCHITECT/OWNER |
| 1 | 03/22/22 | REVISIONS PER ARCHITECT |

DETAILS - 2

2240-2296 RAND ROAD
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SPACECO INC.

FILENAME: 11624DET02
DATE: 03/16/22
JOB NO. 11624
SHEET D2
15 OF 18

Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)

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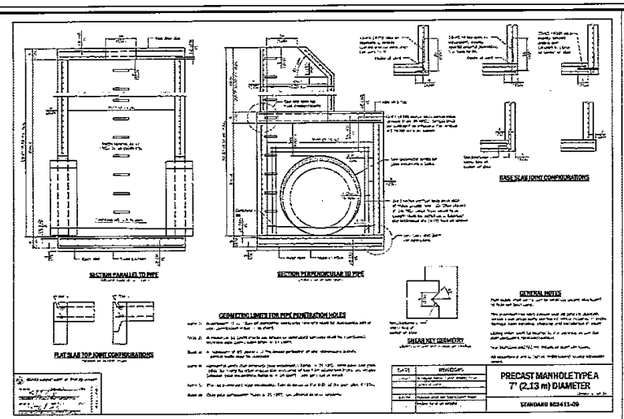
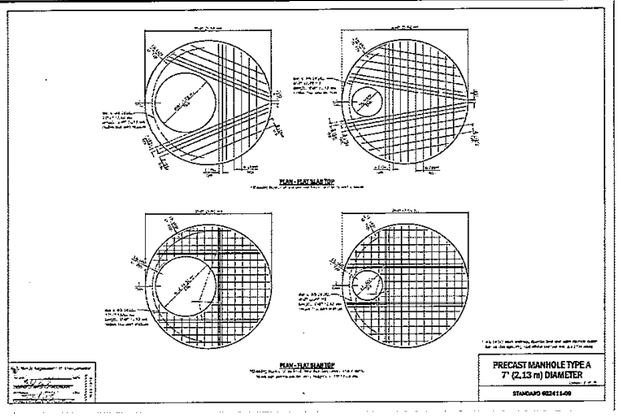
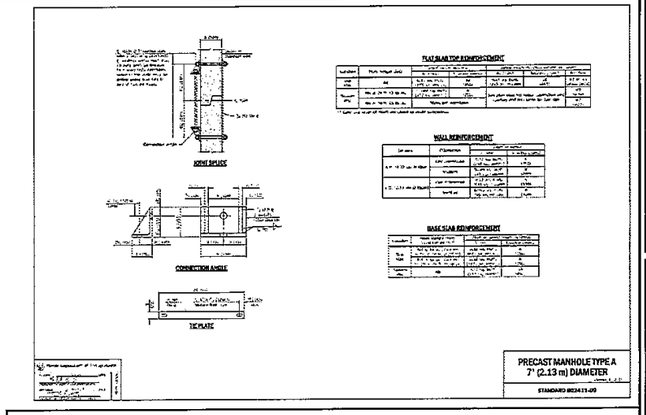
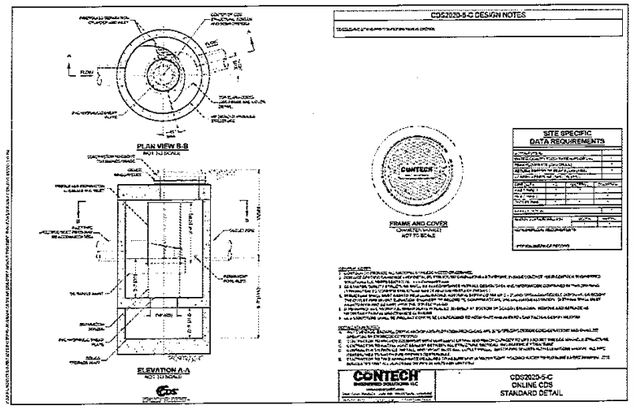
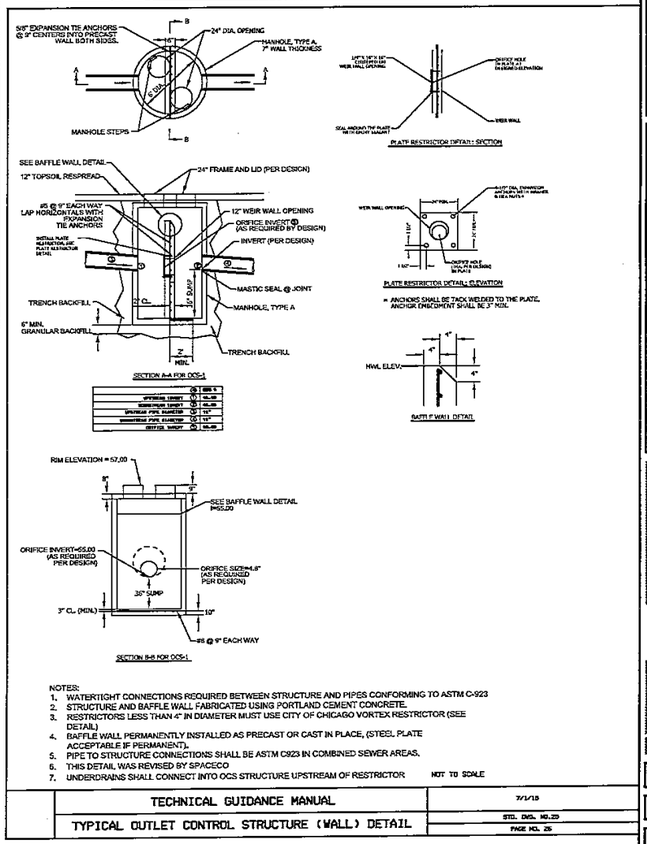



NOTES:
1. WATERTIGHT CONNECTIONS REQUIRED BETWEEN STRUCTURE AND PIPES CONFORMING TO ASTM C-923
2. STRUCTURE AND BAFFLE WALL FABRICATED USING PORTLAND CEMENT CONCRETE.
3. RESTRICTORS LESS THAN 4" IN DIAMETER MUST USE CITY OF CHICAGO VORTEX RESTRICTOR (SEE DETAIL)
4. BAFFLE WALL PERMANENTLY INSTALLED AS PRECAST OR CAST IN PLACE, (STEEL PLATE ACCEPTABLE IF PERMANENT).
5. PIPE TO STRUCTURE CONNECTIONS SHALL BE ASTM C923 IN COMBINED SEWER AREAS.
6. THIS DETAIL WAS REVISED BY SPACECO
7. UNDERDRAINS SHALL CONNECT INTO OCS STRUCTURE UPSTREAM OF RESTRICTOR

NOT TO SCALE

| TECHNICAL GUIDANCE MANUAL | 7/1/15 |
|---|---|
| TYPICAL OUTLET CONTROL STRUCTURE (WALL) DETAIL | STD. DWG. NO.20 |
| | PAGE NO. 26 |

| NO. | DATE | REMARKS |
|---|---|---|
| 1 | 02/22/22 | REVISIONS PER ARCHITECT/OWNER |
| 2 | 04/11/22 | REVISIONS PER ARCHITECT |

DETAILS - 4

2240-2296 RAND ROAD
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700
Rosemont, Illinois 60018
Phone: (847) 696-4900 Fax: (847) 696-4905
SPACECO INC.

FILENAME: 11624DET04
DATE: 03/16/22
JOB NO. 11624
SHEET D4
17 OF 18

Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)

## MAINTENANCE & MONITORING REQUIREMENTS:

**TEMPORARY SOIL EROSION & SEDIMENT CONTROL**

1. SOIL EROSION AND SEDIMENT CONTROL
   SEQUENCE, TIMING AND ADDITIONAL MEASURES FOR THIS DURATION OF THE CONSTRUCTION ACTIVITY, EROSION CONTROL MEASURES FOR THE PROPOSED DEVELOPMENT ARE INCLUDED IN THE PLAN SET. AT THE COMPLETION OF CONSTRUCTION, THE CONTRACTOR WILL COORDINATE THE TRANSFER OF MAINTENANCE RESPONSIBILITIES. MAINTENANCE ACTIVITIES WILL BE PERFORMED IN ACCORDANCE WITH THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, 1987.

   EXCEPT AS PERMITTED BY ENGINEER, WEATHER CONDITIONS, ALL DISTURBED AREAS TO REMAIN ACTIVE FOR MORE THAN 14 DAYS WILL BE STABILIZED BY SEEDING, SODDING, MULCHING, COVERING, OR BY OTHER EQUIVALENT PROTECTION MEASURES. ON SLOPES WITHIN SEVEN DAYS. PERMANENT SOIL STABILIZATION SHALL BE PROVIDED WITHIN SEVEN DAYS AFTER FINAL GRADING IS COMPLETED.

   ALL TEMPORARY EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE REMOVED AND DISPOSED OF WITHIN THIRTY DAYS AFTER FINAL STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY PRACTICES ARE NO LONGER NEEDED.

**PERMANENT**

2. GENERAL
   REGULAR INSPECTIONS AND ROUTINE MAINTENANCE OF GENERAL AREAS SHALL BE PERFORMED ON A MONTHLY OR AS-NEEDED BASIS. SPECIFIC ITEMS OF CONCERN INCLUDE:
   - ___ LITTER AND DEBRIS SHALL BE REMOVED MONTHLY
   - ___ LAWN AREAS SHALL BE MAINTAINED WITH REGULAR MOWING AND RESTORED WITH APPROPRIATE SPECIES/VEGETATION AS NECESSARY
   - ___ ACCUMULATED SEDIMENT SHALL BE DISPOSED OF PROPERLY, ALONG WITH ANY WASTES GENERATED DURING MAINTENANCE OPERATIONS
   - ___ ERODED AREAS SHALL BE REPAIRED WITH THE ADDITION OF NEW RIPRAP, AS NECESSARY, OF SIMILAR SIZE AND QUALITY
   - ___ ROADS SHALL BE SWEPT, VACUUMED AND/OR WASHED ON A REGULAR BASIS

3. STORMWATER MANAGEMENT FACILITIES
   ROUTINE INSPECTIONS OF STORMWATER MANAGEMENT FACILITIES SHALL BE CONDUCTED MONTHLY BETWEEN MARCH AND NOVEMBER AND MAINTAINED AS NECESSARY TO ENSURE PROPER PERFORMANCE. IT IS CRITICAL THAT ALL INFLOWS AND OUTFLOW TO THE DETENTION FACILITY ARE CLEAN AND PERFORMING AS DESIGNED. IN ADDITION, THE DETAILED VOLUME OF THE DETENTION FACILITY SHALL ALSO BE MAINTAINED. INSPECTIONS FOR THE FOLLOWING SPECIFIC ITEMS SHOULD BE CONDUCTED FROM FALL BETWEEN MARCH AND NOVEMBER:

   SIDE SLOPES/EMBANKMENT/EMERGENCY OVERFLOW STRUCTURE
   - ___ INSPECT EMBANKMENT FOR SETTLEMENT AND EROSION
   - ___ REMOVE WOODY GROWTH FROM RIP-RAP EMBANKMENT
   - ___ ANY WEEKLY USE RESTRICTED PER COLONIAL ENGINEER, FOR DESIGN RESOLUTION
   - ___ SEED AND SOD ANY ERODED AREAS
   - ___ REPAIR ANY SLUMPED AREAS
   - ___ SIGNS OF SEEPAGE ON WET SPOTS ON THE DOWNSTREAM FACE OF A BERM, MAY REQUIRED TOE DRAINS OR EMBANKMENT DRAINS TO SOLVE PROBLEMS
   - ___ STABILIZE EMERGENCY OVERFLOW STRUCTURE IF EROSION OBSERVED
   - ___ REMOVE OBSTRUCTION BLOCKING EMERGENCY OVERFLOW SPILLWAY

   VEGETATED AREAS
   - ___ REGULAR MOWING TO CONTROL VEGETATION, NO CUTTING OF NATIVE VEGETATION
   - ___ NEEDED FOR PLANTING, RESEEDING OR SODDING, SUPPLEMENT ALTERNATIVE NATIVE VEGETATION IF A SIGNIFICANT PORTION HAS NOT ESTABLISHED (50% OF THE SURFACE AREA AFTER SECOND GROWING SEASON), SEEDED WITH ILLINOIS DEPARTMENT OF TRANSPORTATION (IDOT) SEED MIXTURES (SEE SPECIFICATIONS FOR SEEDING AREAS), ALONG WITH ALTERNATIVE SPECIES IF LOCALLY ADAPTED SPECIES ARE NOT AVAILABLE ESTABLISHED.
   - ___ CONTROL OF LOCALLY NUISANCE OR OTHER WEEDS, AS REQUIRED
   - ___ CHECK FOR UNHEALTHY VEGETATION, REMOVE WHERE POSSIBLE
   - ___ ALL VEGETATION MUST BE MAINTAINED PER THE APPROVED PLANTING PLAN

   OUTLET CONTROL STRUCTURE
   - ___ INSPECT OBSTRUCTION AND REMOVE DEBRIS IF CLOGGED OR DISCHARGE REDUCED
   - ___ REMOVE ACCUMULATED SEDIMENT AT OUTLET
   - ___ SCOUR AND EROSION AT OUTLET, REPAIR AND REPEAT
   - ___ ANY PIPE DAMAGE TO OUTLET OR APRON, REPLACE AS NECESSARY
   - ___ CONTROL ON WEEDS, REMOVE WOODY DEBRIS
   - ___ CONDITION ON BANKS, REGRADING DOWNSTREAM

   ACCESS FOR MAINTENANCE EQUIPMENT
   - ___ REMOVE ANY OBSTRUCTIONS PLACED IN MAINTENANCE EASEMENTS

   SAFETY FEATURES
   - ___ ENSURE CONTROLS TO HAZARDOUS AREAS
   - ___ FENCES
   - ___ LOOSE OR DAMAGED POSTS
   - ___ LOOSE OR SAGGING WIRE
   - ___ ACCUMULATED DEBRIS IN FENCES
   - ___ CONDITIONS OF GATES
   - ___ SIGNS

   DETENTION VOLUME
   - ___ INSPECT ALL STORMWATER DETENTION FACILITIES TO ENSURE THAT THE CONSTRUCTED VOLUME FOR DETENTION IS MAINTAINED. NO DUMPSTER, TARPOOL OR OTHER DUMPING INTO THE FACILITY SHALL BE ALLOWED. SPECIFIC LOCATIONS IN THE STORMWATER MANAGEMENT SYSTEM, DESIGNED TO ACCUMULATE SEDIMENT, SHALL BE CLEANED AS NECESSARY TO PREVENT SEDIMENT FROM REACHING THE SWALES OR ANY OUTLET PIPE.

3. VOLUME CONTROL FACILITIES
   ROUTINE INSPECTIONS AND MAINTENANCE OF VOLUME CONTROL FACILITIES SHALL BE PERFORMED BY THE OWNER ON A YEARLY OR AS-NEEDED BASIS. SPECIFIC ITEMS OF CONCERN INCLUDE:
   - ___ FACILITY SHALL BE INSPECTED YEARLY USING THE MONITORING WELL TO VERIFY THE SYSTEM IS FUNCTIONING PROPERLY
   - ___ SURFACE OF IMPERVIOUS PAVEMENT SHALL BE CLEANED WITH A LOW-PRESSURE POWER WASHER
   - ___ ACCUMULATED SEDIMENT FROM SURFACE SWALES, OR MACADAM DUST AND DISPOSED OF PROPERLY
   - ___ ANY NON-FUNCTIONAL SIGNAGE SHALL BE REPAIRED OR DAMAGED OR ILLEGIBLE

4. STORMWATER COLLECTION SYSTEM
   THE OWNER SHALL PERFORM ROUTINE INSPECTIONS OF ALL COMPONENTS OF THE STORMWATER COLLECTION SYSTEM. THE NON-HOLY INSPECTIONS SHALL OCCUR BETWEEN MARCH AND NOVEMBER AND INCLUDE THE FOLLOWING SPECIFIC AREAS OR CONCERNS:

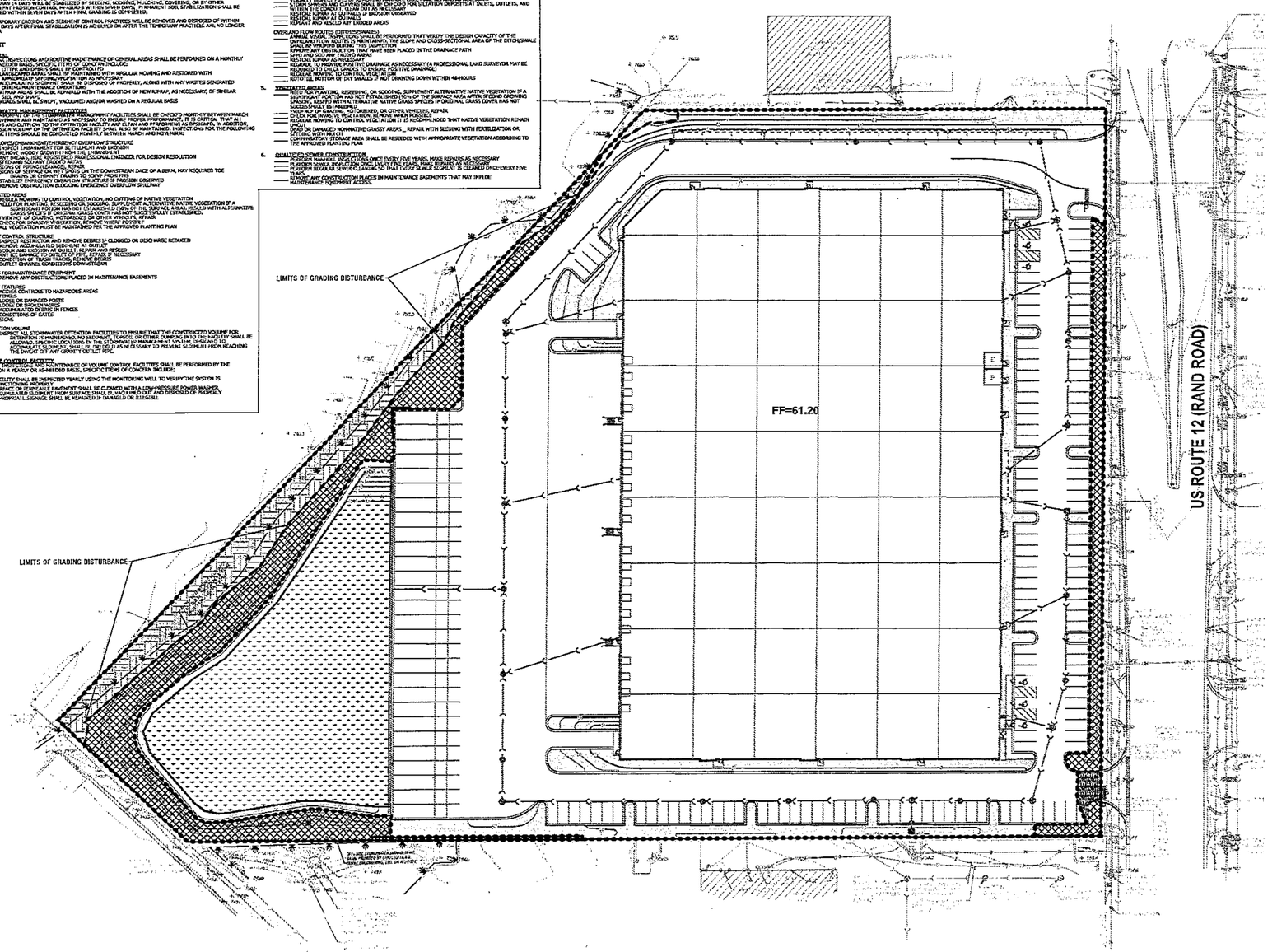
   STORM INLETS/MANHOLES
   - ___ CLEAN ANY DEBRIS NOTED HEAVED AND OTHER DEBRIS FROM GRATES
   - ___ REPAIR ANY SETTLING OR DAMAGED BASIS
   - ___ REMOVE ACCUMULATED SEDIMENT FROM BOTTOM OF MANHOLE WHEN 50% OF SUMP IS FILLED

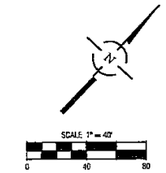
   STORM SEWERS/OUTLETS
   - ___ CLEAN ANY DEBRIS NOTED BY REMOVING MANHOLE LIDS, MAKE REPAIRS AS NECESSARY
   - ___ STORM SEWERS AND CULVERTS SHALL BY CHECKED FOR SILTATION DEPOSITS AT INLETS, OUTLETS, AND WITHIN THE CONDUIT. CLEAN OUT AS NECESSARY
   - ___ RESTORE REPAIR AT OUTFALLS IF EROSION OBSERVED
   - ___ REPAIR ANY SLUMPED BANKS
   - ___ REPLANT AND RESEED ANY ERODED AREAS

   OVERLAND FLOW ROUTES (DETENTION/SWALES)
   - ___ ANNUAL VISUAL INSPECTIONS SHALL BE PERFORMED THAT VERIFY THE DESIGN CAPACITY OF THE OVERLAND FLOW ROUTES IS MAINTAINED. THE SLOPE AND CROSS-SECTIONAL AREA OF THE DITCH/SWALE SHALL BE CHECKED FOR ANY SIGNS OF EROSION
   - ___ REMOVE ANY OBSTRUCTIONS THAT HAVE BEEN PLACED IN THE DRAINAGE PATH
   - ___ SAND AND SOD ANY ERODED AREAS
   - ___ RESTORE REPAIR AS NECESSARY
   - ___ REGRADE, TO PROVIDE POSITIVE DRAINAGE AS NECESSARY (A PROFESSIONAL LAND SURVEYOR MAY BE REQUIRED TO CHECK GRADES TO ENSURE POSITIVE DRAINAGE)
   - ___ REMOVE ANY SILTATION FROM SWALES AS NEEDED
   - ___ ROTOTILL BOTTOM OF DRY SWALES IF NOT DRAINING DOWN WITHIN 48-HOURS

5. VEGETATED AREAS
   - ___ NEED FOR PLANTING, RESEEDING OR SODDING, SUPPLEMENT ALTERNATIVE NATIVE VEGETATION IF A SIGNIFICANT PORTION HAS NOT ESTABLISHED (50% OF THE SURFACE AREA AFTER SECOND GROWING SEASON), SEEDED WITH ILLINOIS DEPARTMENT OF TRANSPORTATION (IDOT) SEED MIXTURES (SEE SPECIFICATIONS FOR SEEDING AREAS), ALONG WITH ALTERNATIVE SPECIES IF LOCALLY ADAPTED SPECIES ARE NOT AVAILABLE ESTABLISHED.
   - ___ WITH NEW OR GRADING, NOT DISTURBED, OR OTHER VEHICLES, REPAIR
   - ___ CHECK FOR INVASIVE VEGETATION, REMOVE WHEN POSSIBLE
   - ___ REGULAR MOWING TO CONTROL VEGETATION IT IS RECOMMENDED THAT NATIVE VEGETATION REMAIN UNCUT
   - ___ DEAD OR DAMAGED NONNATIVE GRASSY AREAS _ REPAIR WITH SEEDING WITH FERTILIZATION OR SETTING WITH PLUGS
   - ___ COMPENSATORY STORAGE AREA SHALL BE RESEEDED WITH APPROPRIATE VEGETATION ACCORDING TO THE APPROVED PLANTING PLAN

6. QUALITY/SEWER CONSTRUCTION
   - ___ INSPECT MANHOLES, INLETS, FLOORS ONCE EVERY FIVE YEARS, MAKE REPAIRS AS NECESSARY
   - ___ FLUSH SEWER INSPECTION ONCE EVERY FIVE YEARS, MAKE REPAIRS AS NECESSARY
   - ___ PERFORM REGULAR SEWER CLEANING SO THAT EVERY SEWER SEGMENT IS CLEANED ONCE EVERY FIVE YEARS
   - ___ MONITOR ANY CONSTRUCTION PLACED IN MAINTENANCE EASEMENTS THAT MAY IMPEDE MAINTENANCE EQUIPMENT ACCESS.




**LOT SUMMARY:**

PROPERTY ADDRESS: 2240-2296 Rand Road, Palatine, IL 60074

PROPERTY INDEX NUMBERS: 02-02-101-004-0000; 02-02-101-005-0000; 02-02-101-013-0000; 02-02-101-014-0000; 02-02-101-019-0000; 02-02-101-020-0000; 02-02-101-021-0000

TOTAL PROPERTY OWNERSHIP = 8.86 AC

TOTAL DEVELOPMENT AREA = 8.50 AC

ON-SITE AREA TRIBUTARY TO STORMWATER BASIN = 8.06 AC

UNRESTRICTED ON-SITE AREA = 0.80 AC
(100-YR 24-HR EVENT SUBTRACTED FROM ALLOW RELEASE)

**TIME OF CONCENTRATION CALCULATIONS:**

USE 10-MIN FOR INDUSTRIAL

**DETENTION & RETENTION SUMMARY:**

BOTTOM VC BELOW NWL = 749.00

SHOWTE = 13.5' BELOW EXISTING FINISHED GRADE ELEV. = 4737.5 to 743.5 IN BASIN AREA

DETENTION VOLUME PROVIDED = 3.69 AC-FT

DETENTION VOLUME REQUIRED = 3.34 AC-FT

RETENTION VOLUME PROVIDED = 0.73 AC-FT

RETENTION VOLUME REQUIRED = 0.54 AC-FT

**CURVE NUMBER CALCULATIONS:**

CN TRIBUTARY TO BASINS = 96.0

CN UNRESTRICTED = 71.0

CN ADJUSTED = 87.0

**SYMBOL LEGEND**

- PERVIOUS AREA
- IMPERVIOUS AREA
- NATIVE PLANTINGS - VOLUME CONTROL AREA
- UNRESTRICTED NATIVE PLANTINGS AREA TO BE SEEDED PER LANDSCAPE PLAN
- UNRESTRICTED IMPERVIOUS AREA
- UNDISTURBED AREA
- LIMITS OF GRADING DISTURBANCE

**SUMMARY OF DEVELOPMENT AREA**

| | |
|---|---|
| IMPERVIOUS | 4.59 AC |
| PERVIOUS | 0.83 AC |
| NATIVE PLANTINGS - VOLUME CONTROL | 0.73 AC |
| FULL BASIN PLANTINGS | 0.53 AC |
| TOTAL IMPERVIOUS | 5.01 AC |
| DISTURBABLE AREA | 8.28 AC |
| TOTAL | 8.86 AC |

| NO. | DATE | REMARKS |
|---|---|---|
| | | |

| NO. | DATE | REMARKS PER ARCHITECT/OWNER |
|---|---|---|
| 2 | 04/1/22 | REVISIONS PER ARCHITECT |
| 1 | 03/22/22 | REVISIONS PER ARCHITECT |

MWRD EXHIBIT R

2240-2296 RAND ROAD
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 703
Rosemont, Illinois 60018
Phone: (847) 696-4000 Fax: (847) 696-4995
SPACECO INC.

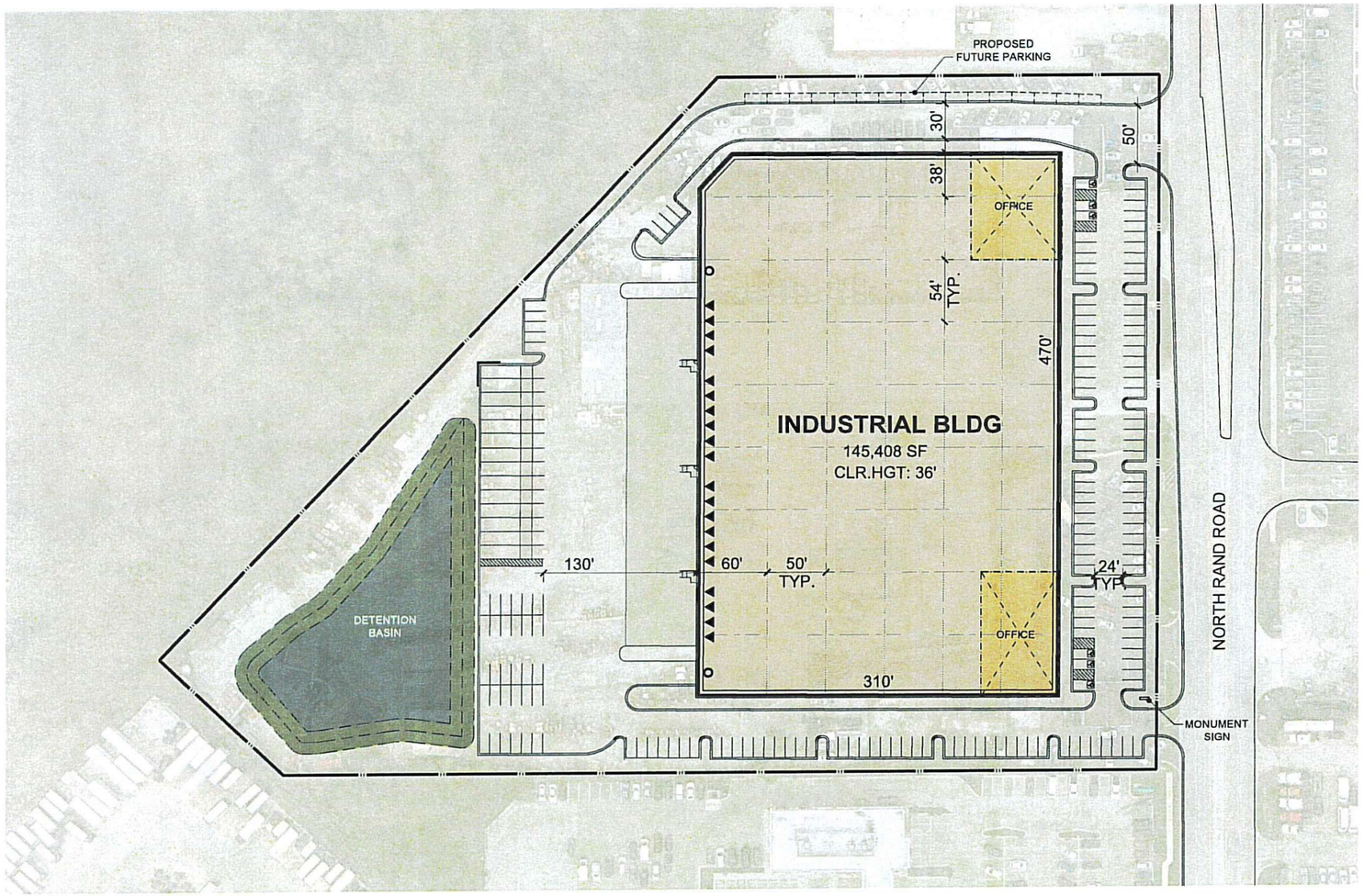
FILENAME: 11624MWRD

DATE: 03/16/22

JOB NO. 11624

SHEET EXH-R
16 OF 16

Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)




| PROJECT DATA: | | |
|---|---|---|
| SITE AREA: | | |
| GROSS: | | 8.86 AC |
| | | 385,828 SF |
| DETENTION: | @ 9% | 34,746 SF |
| NET: | | 8.06 AC |
| | | 351,082 SF |
| BUILDING FOOTPRINT: | | 145,408 SF |
| BUILDING USE: | | |
| WAREHOUSE | | 130,867 SF |
| OFFICE | @ 10% | 14,541 SF |
| COVERAGE: | | |
| GROSS: | | 38% |
| NET: | | 41% |
| PARKING REQUIRED: | | |
| WAREHOUSE | 1/1000 SF | 131 STALLS |
| OFFICE | 1/300 SF | 48 STALLS |
| TOTAL | | 179 STALLS |
| PARKING PROVIDED: | | |
| AUTO: | | 169 STALLS |
| | | @1.16/1000 SF |
| *REQ. ACCESSIBLE* | | *6 STALLS* |
| TRAILER: | | 14 STALLS |
| FUTURE PARKING PROPOSED: | | |
| AUTO: | | 16 STALLS |
| TRUCK DOCKS: | | |
| ▲ DOCK-HIGH DOORS | | 20 |

| DEVELOPMENT STANDARDS: | |
|---|---|
| ZONING: | M |
| MAX. F.A.R.: | 0.70 |
| MAX. COVERAGE: | TBD |
| MAX. HEIGHT: | 60 FT |
| BUILDING SETBACKS: | |
| FRONT: | 30 FT |
| SIDE: | 15 FT |
| REAR: | 15 FT |
| LANDSCAPE SETBACKS: | |
| FRONT: | 5 FT |
| SIDE: | 2 FT |
| REAR: | 2 FT |
| LANDSCAPE REQ.: | |
| OFF-STREET PARKING: | |
| STANDARD: | 9X19 |
| COMPACT: | 8X16 |
| DRIVE AISLE: | 25 FT |
| FIRE LANE: | TBD |
| REQ. PARKING RATIO BY USE: | |
| WAREHOUSE: | 1/1000 SF |
| OFFICE: | 1/300 SF |

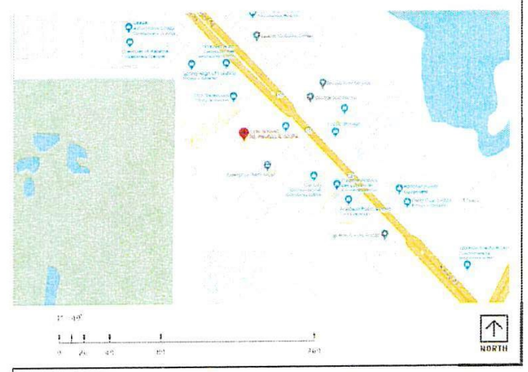
NOTES:

A PORTION OF THE ZONING INFORMATION IS UNKNOWN AT THIS TIME AND REQUIREMENTS MAY DIFFER THAN WHAT IS SHOWN IN THE SITE PLAN.

This conceptual design is based upon a preliminary review of entitlement requirements and an unverified and possibly incomplete site and/or building information, and is intended merely to assist in exploring how the property might be developed.

Stormwater Management Design:
AVERAGE RELEASE REQUIRED
PROVIDED

Boundary Source:
CIVIL CAD FILE




THE MISSNER GROUP
EST. 1945

scheme 09

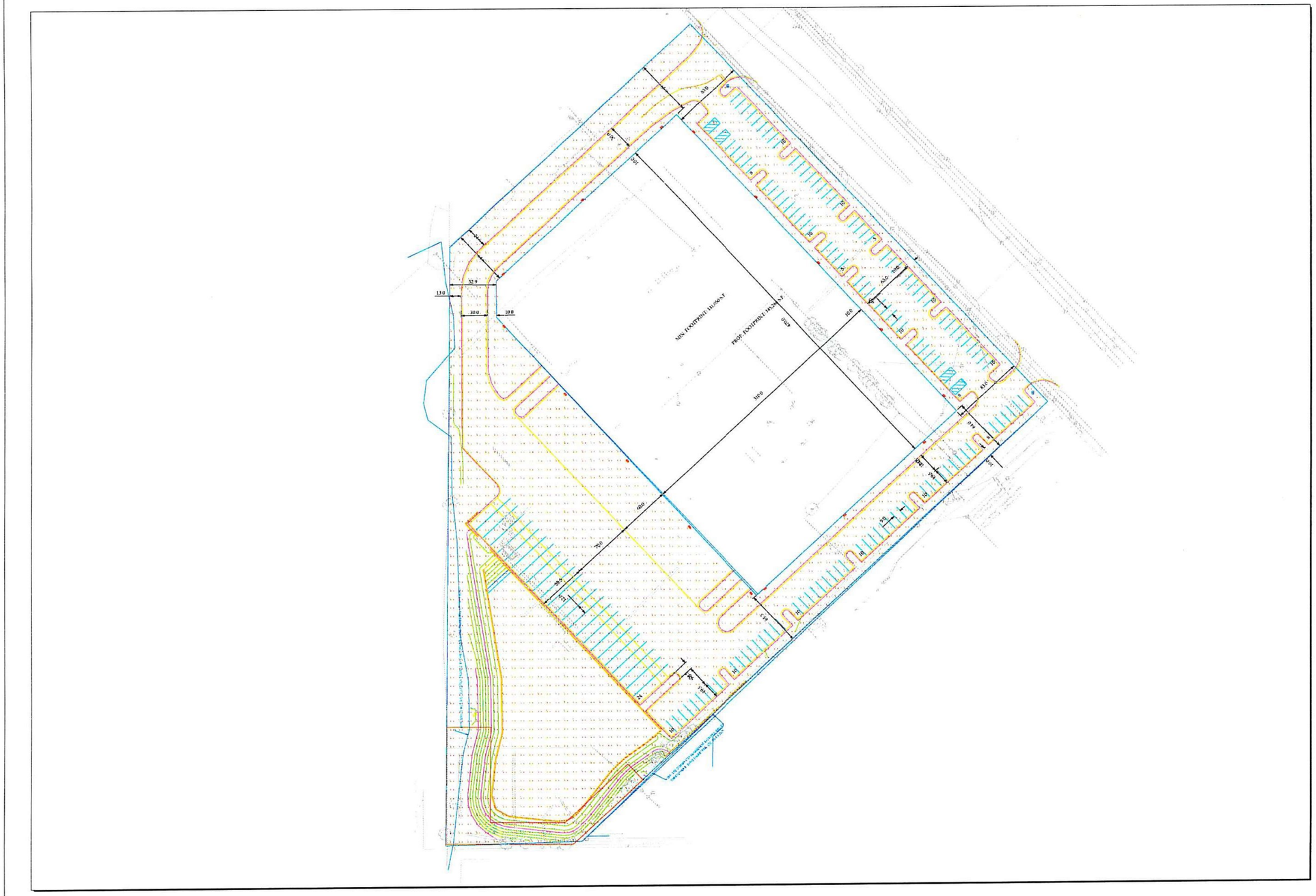
Conceptual Site Plan

2250 North Rand Road
Palatine, IL 60074

WARE MALCOMB

SHEET
1

Attachment: O-69-22 Missner Planned Development (2240 - 2266 N. Rand Road - FPD Distribution Use)


MIN FOOTPRINT: 11,500 S.F.
PROP FOOTPRINT: 14,520 S.F.
52.9'
13.0'
30.0'
30.0'
40.0'
30.0'
400'
200'
24.5'
24'
24'
24

# CERTIFICATE OF PUBLICATION

**DES PLAINES JOURNAL, INC.,** a corporation organized and existing under and by virtue of the laws of the State of Illinois, does hereby CERTIFY that it is the publisher of the:

Journal & Topics Newspapers
AKA Des Plaines Journal, Inc.
622 Graceland Ave.
Des Plaines, IL 60016-4556

and that said newspaper(s) is a secular newspaper of general circulation and has been published weekly in the

(Village) (Town) (City) (Township) of PALATINE 2240-2266 N RAND RD.

(●) ( ) ( ) ( )

County of COOK

and State of Illinois, continuously for more than one year prior to date of the first publication of the notice attached hereto, and that said newspaper(s) complies with the requirements of Paragraphs 5 and 10, Chapter 100, of the Illinois Revised Statutes.

Further, that the notice, of which the attached is a true copy, was published ONE times in the said newspaper(s), namely once each week for ONE successive week(s) and that the first publication of said notice was made on the 21ST day of MARCH, A.D. 20 24., and the last publication thereof was made on the 21ST day of MARCH, A.D. 20 24.

Your Legal appeared in the following Journal & Topics Newspapers (Des Plaines Journal, Inc.)

- ☐ Des Plaines Journal
- ☐ Elk Grove Village Journal
- ☐ Mt. Prospect Journal
- ☐ Niles Journal
- ☐ Park Ridge-Golf Mill Journal
- ☐ Prospect Heights Journal
- ☐ Rosemont Journal
- ☐ Arlington Heights Topics
- ☐ Buffalo Grove Topics
- ☑ Palatine Topics
- ☐ Rolling Meadows Topics
- ☐ Wheeling Topics
- ☐ Suburban Journal
- ☐ Northwest Journal
- ☐ Glenview Journal

"OFFICIAL SEAL"
MARY ALICE WENZL
NOTARY PUBLIC, STATE OF ILLINOIS
My Commission Expires 07/15/2025

Mary Alice Wenzl

IN WITNESS WHEREOF, **THE DES PLAINES JOURNAL, INC.,** has caused this certificate to be signed and its corporate seal affixed hereto at Des Plaines, Illinois this 21ST day of MARCH A.D., 20 24.

By Todd Wessell

President
Title of Corporate Officer

County of Cook
State of Illinois

Subscribed and sworn to before me this 21ST day of MARCH A.D., 20 24.

My commission expires the 15TH day of JULY A.D., 20 25.

Attachment: Public Notice (2240 - 2266 N. Rand Road - FPD Distribution Use)