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EDWARDS REALTY COMPANY
14400 SOUTH JOHN HUMPHREY, SUITE 200
ORLAND PARK, ILLINOIS 60462
PHONE: (708) 923-6312

DXU ARCHITECTS
412 S WELLS STREET, 2ND FLOOR
CHICAGO, ILLINOIS 60607
PHONE: (312) 955-0334

COUNTY	COOK
CITY, TOWNSHIP	ORLAND PARK, T36N
SEC. & 1/4 SEC. NO.	SEC. 04, R12E

DESCRIPTION: SEE SHEET GN FOR BENCHMARK INFORMATION

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

SHEET #	SHEET I.D.	SHEET DESCRIPTION
1	CI	COVER SHEET
2	GN	TYPICAL SECTIONS & GENERAL NOTES
3	ET	EXISTING CONDITIONS
4	DEMO	DEMOLITION PLAN
5	GM	GEOMETRIC PLAN
6	GR	GRADING PLAN
7	UT	UTILITY PLAN
8-10	SEI-SE3	SOIL EROSION & SEDIMENT CONTROL PLANS
11	MM	MAINTENANCE & MONITORING PLAN
12	MWRD	MWRD GENERAL NOTES
13	S1	SPECIFICATIONS
14-15	DI-D2	DETAILS

16	E0.0	ELECTRICAL NOTES, LEGEND & ABBREVIATIONS
17	E1.0	ELECTRICAL SITE LIGHTING PLAN

DOWNTOWN ORLAND PARK PARCEL H

PROJECT NO: 4278.16

"To the best of our knowledge and belief, the drainage of surface waters will not be changed by the construction of this development, and therefore, there will be no change in the way that surface waters are drained. Reasonable provisions have been made for collection and diversion of such surface waters into public areas, or drains to the sea, for the area of the city. The drainage of surface waters are planned for in accordance with generally accepted engineering practices so as to reduce the likelihood of damage to the development. The development has been designed to ensure development. The development shall not adversely increase the peak flow, duration, or volume of the drainage capacity upstream or downstream the project area.

the project area."



REGISTERED PROFESSIONAL ENGINEER
MICHAEL MONDUS, P.E.

ILLINOIS REGISTRATION NO.: 062-052057
EXPIRATION DATE: 11/30/2025

PROFESSIONAL DESIGN FIRM NO.: 184-001157
EXPIRATION DATE: 04/30/2027

ENGINEERING INSPECTOR: (708) 403-5003
PUBLIC WORKS UTILITIES: (708) 403-6350

[illegible][illegible]

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

**DOWNTOWN ORLAND PARK
PARCEL H
ORLAND PARK, ILLINOIS**

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

paceco
Civil Engineering & Surveying
Rosemont, IL - Morris, IL - Indianapolis, IN



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FILENAME:
427816TITLE.DGN

DATE:
02/07/25

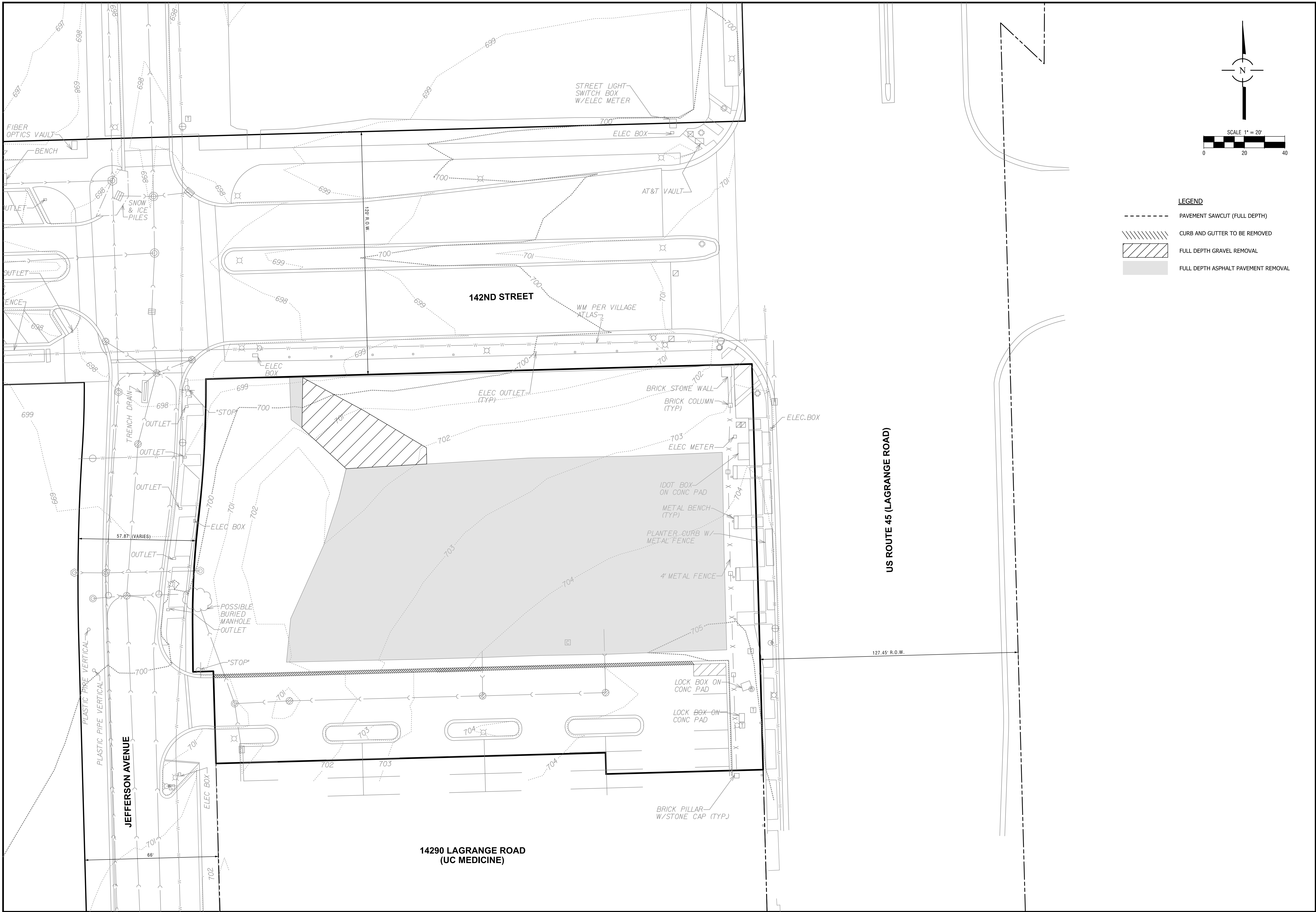
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4	07/24/25	PER ARCHITECT
3	07/21/25	PER VILLAGE
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NO.	DATE	REMARKS

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NO.	DATE	REMARKS
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3	07/21/25	PER VILLAGE
1	03/11/25	PER ARCHITECT

DEMOLITION PLAN
DOWNTOWN ORLAND PARK
PARCEL H
ORLAND PARK, ILLINOIS



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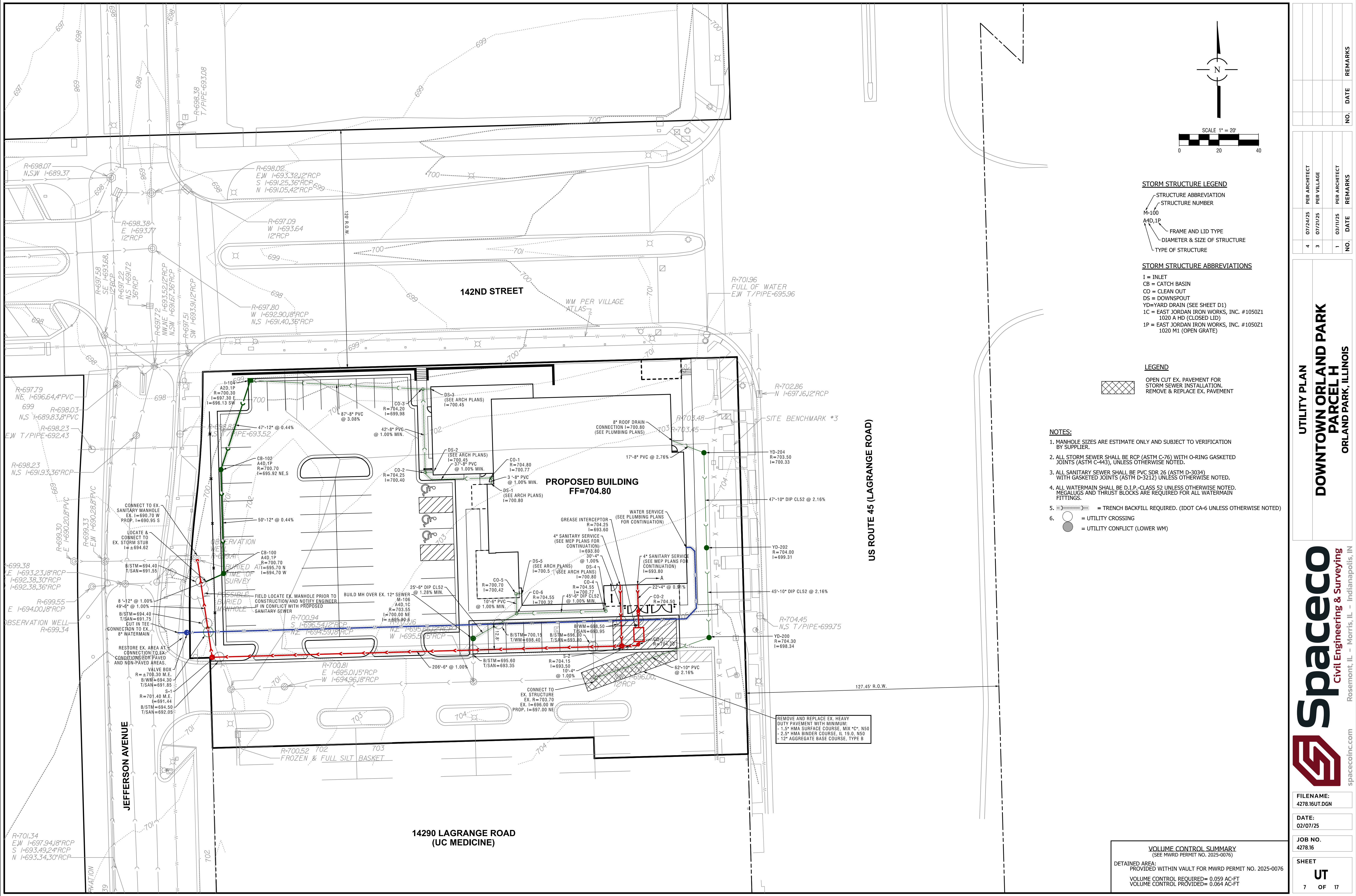
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UTILITY PLAN

DOWNTOWN ORLAND PARK

PARCEL H

ORLAND PARK, ILLINOIS

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NO.	DATE	REMARKS
4	07/24/25	PER ARCHITECT
3	07/21/25	PER VILLAGE
1	03/11/25	PER ARCHITECT

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4278.16UT.DGN

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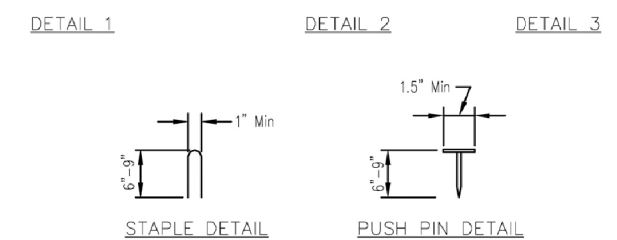
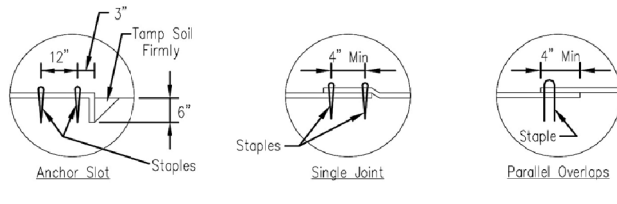
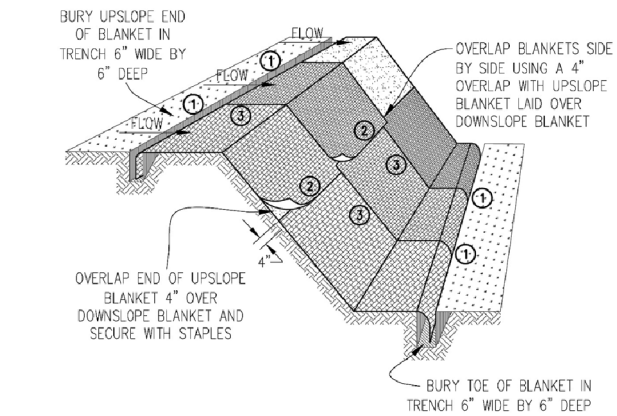
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APPENDICES



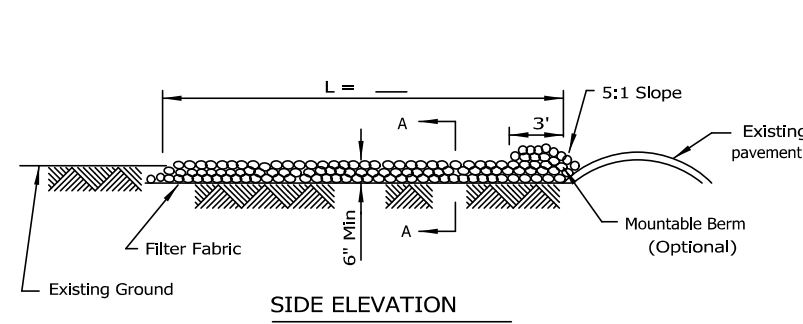
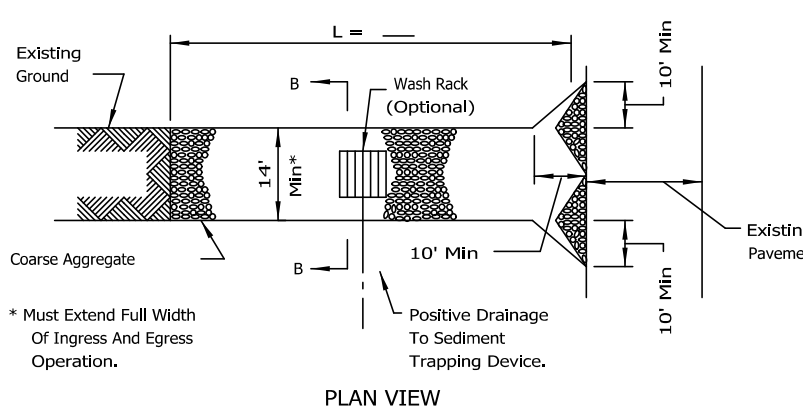
- NOTES:
1. Staples shall be placed in a diamond pattern at 3 per sq. ft. for silted blankets. Non-silted shall use 4 staples per sq. ft. of material. This requires 200 staples with silted blanket and 400 staples with non-silted blanket per 100 sq. ft. of material.
 2. Staple or push pin lengths shall 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 spaced at approximately 12" intervals.

PLAN CODE: **EB**

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EROSION CONTROL
BLANKET INSTALLATION DETAILS

STABILIZED CONSTRUCTION ENTRANCE PLAN

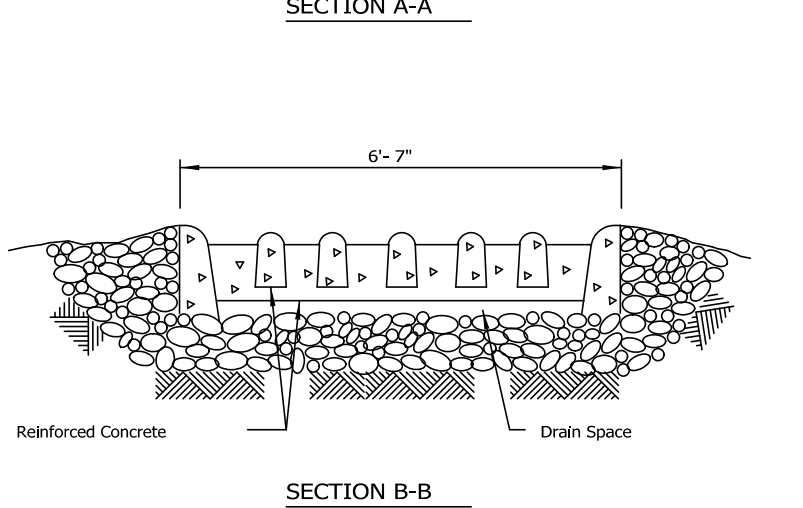
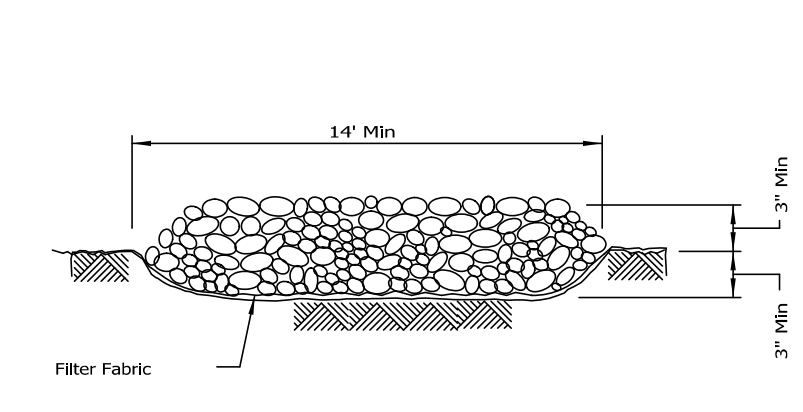


- NOTES:
1. Filter fabric shall meet the requirements of material specification 592 GEOTEXTILE, Table 1 or 2, Class 1 or 2, and shall be placed over the cleared area prior to the placing of rock.
 2. Rock or reclaimed concrete shall meet one of the following DOT coarse aggregate gradations: C&1, C&2, C&3 or C&4 and be placed according to construction specification 25 ROCKFILL using placement Method 1 and Class 1 collection.
 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.

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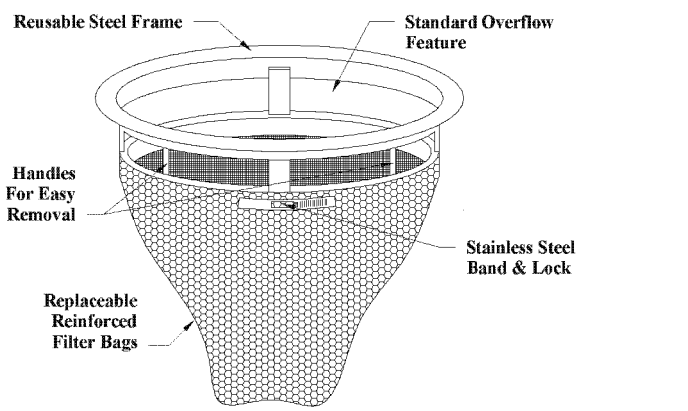
STABILIZED CONSTRUCTION ENTRANCE PLAN



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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.



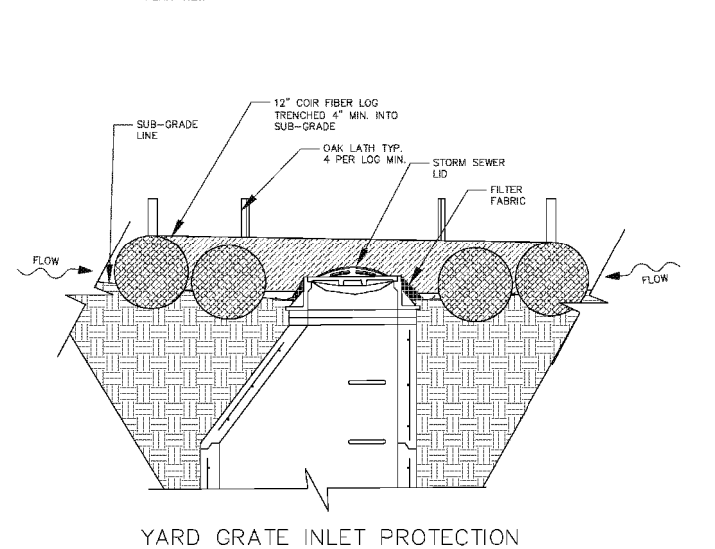
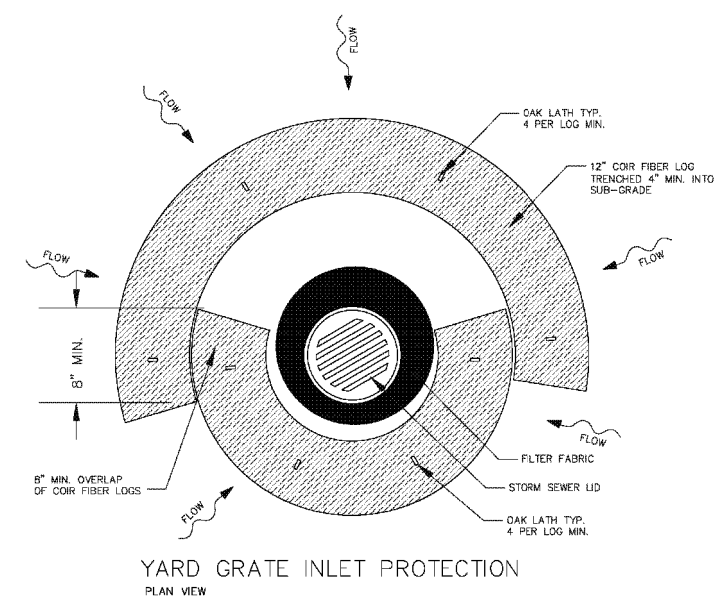
Catch-All HR is available to provide the added benefit of hydrocarbon removal.

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

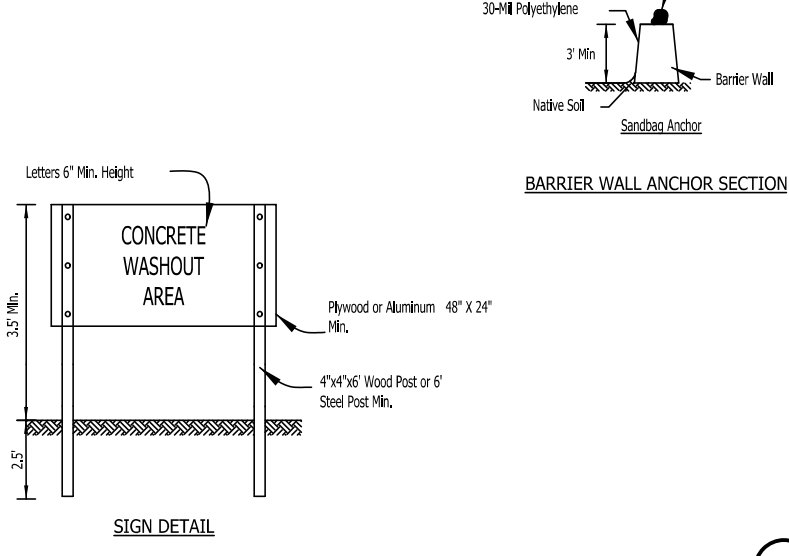
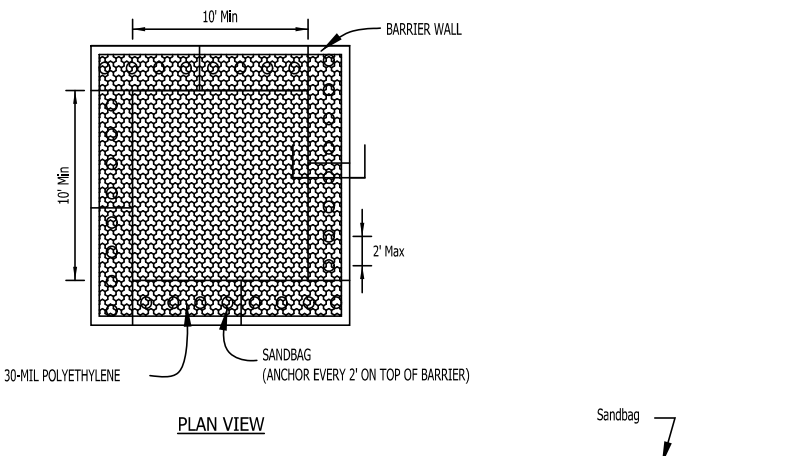


- Applications**
1. Site Development & Highway Construction
 - Inlet Protection / Sediment Control
 2. Permanent BMP
 - Maintenance Yards
 - Wash Bays
 - Parking Lots & Garages
 - Airports - Tarmacs, Cab/Limo Stands, Rental Returns
 - Bank/Food Drive-Up
 - Reduce Maintenance of Underground Detection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

PLAN CODE: **IP**



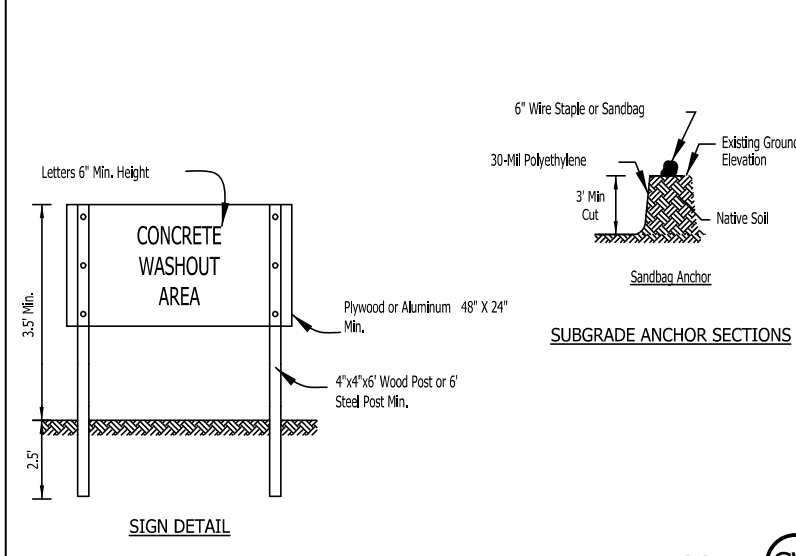
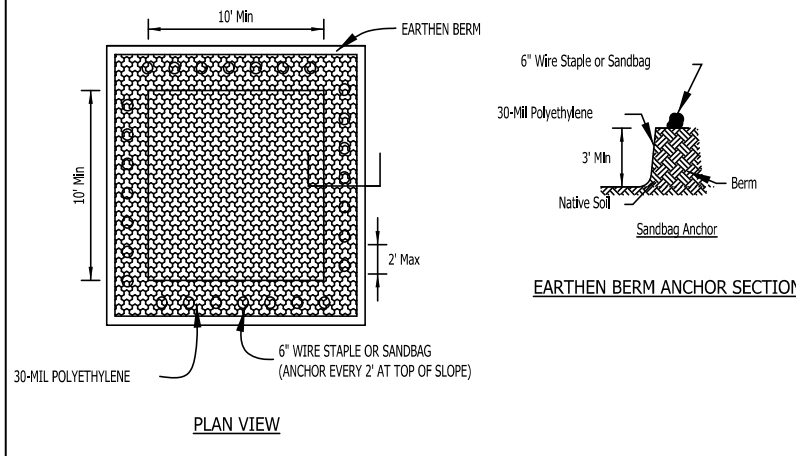
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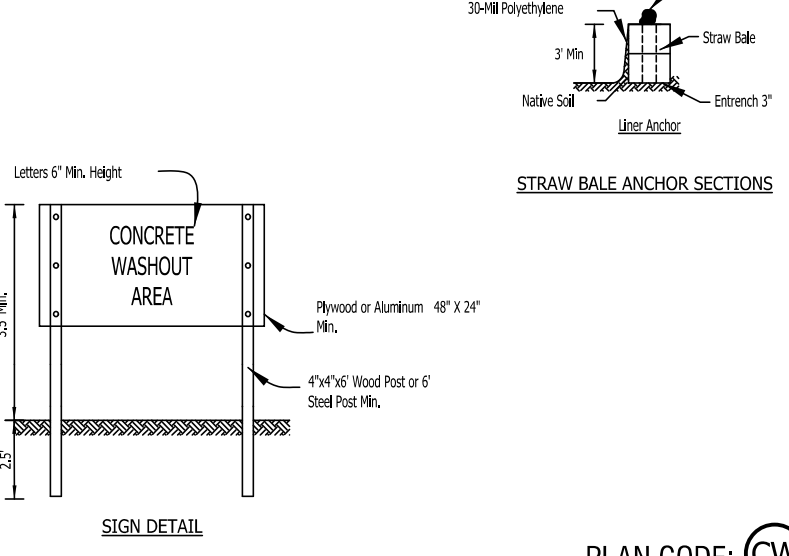
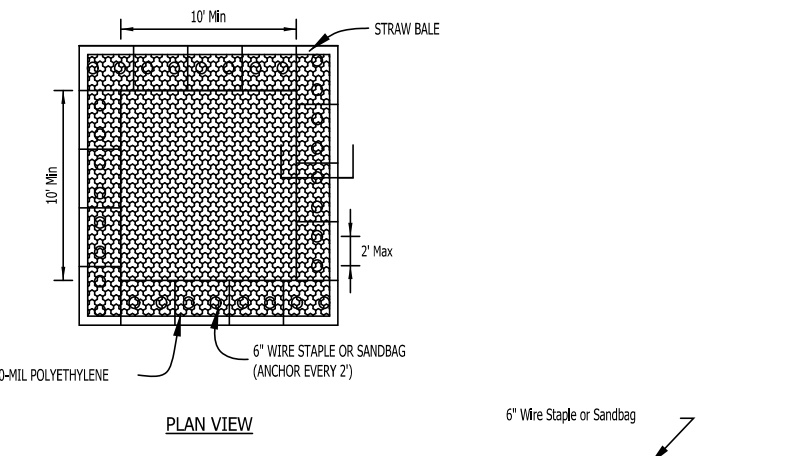
TEMPORARY CONCRETE
WASHOUT FACILITY - BARRIER WALL



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TEMPORARY CONCRETE
WASHOUT FACILITY - EARTHEN TYPE

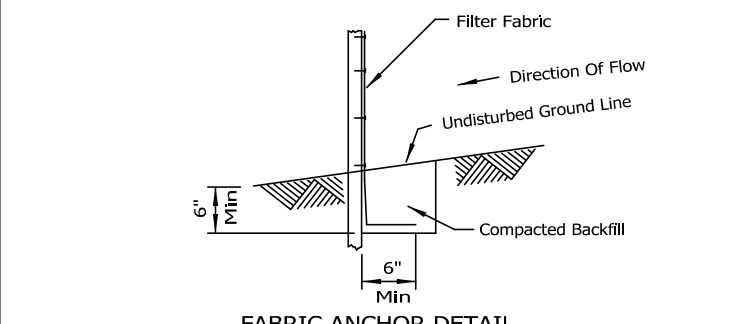
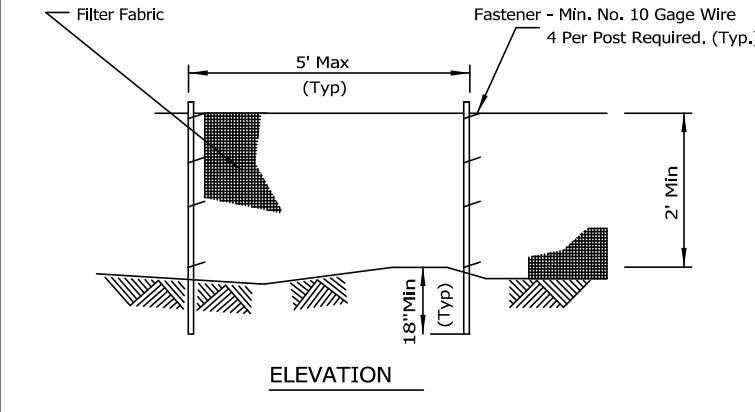


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TEMPORARY CONCRETE
WASHOUT FACILITY - STRAW BALE

SILT FENCE PLAN SPACECO, INC. PRIMARY 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 1 or 2, Class 1 or 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.

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SOIL EROSION & SEDIMENT CONTROL PLAN - 2

DOWNTOWN ORLAND PARK

PARCEL H

ORLAND PARK, ILLINOIS

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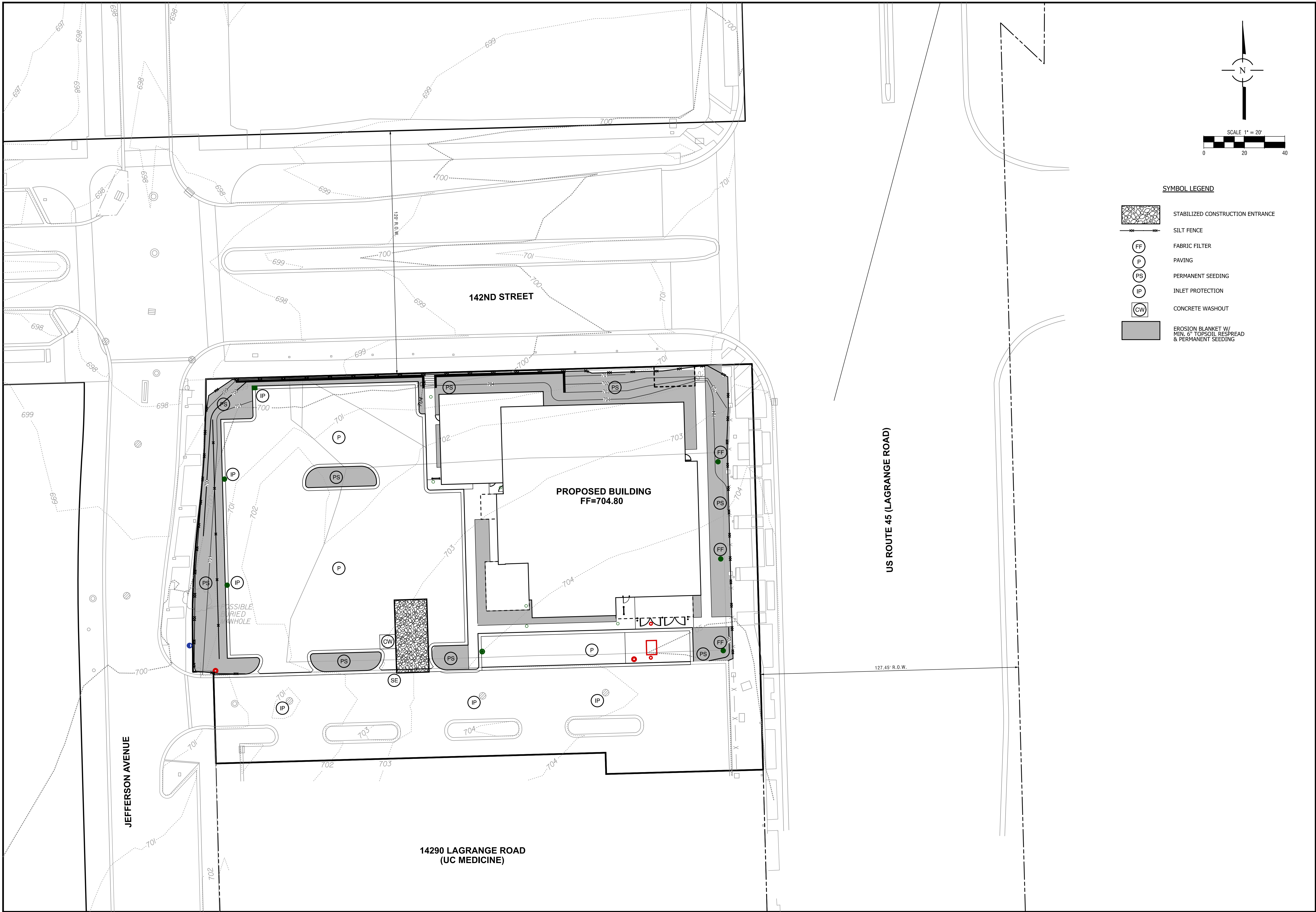
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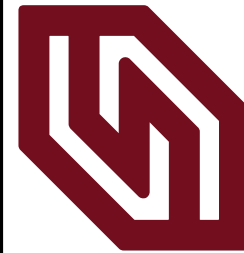


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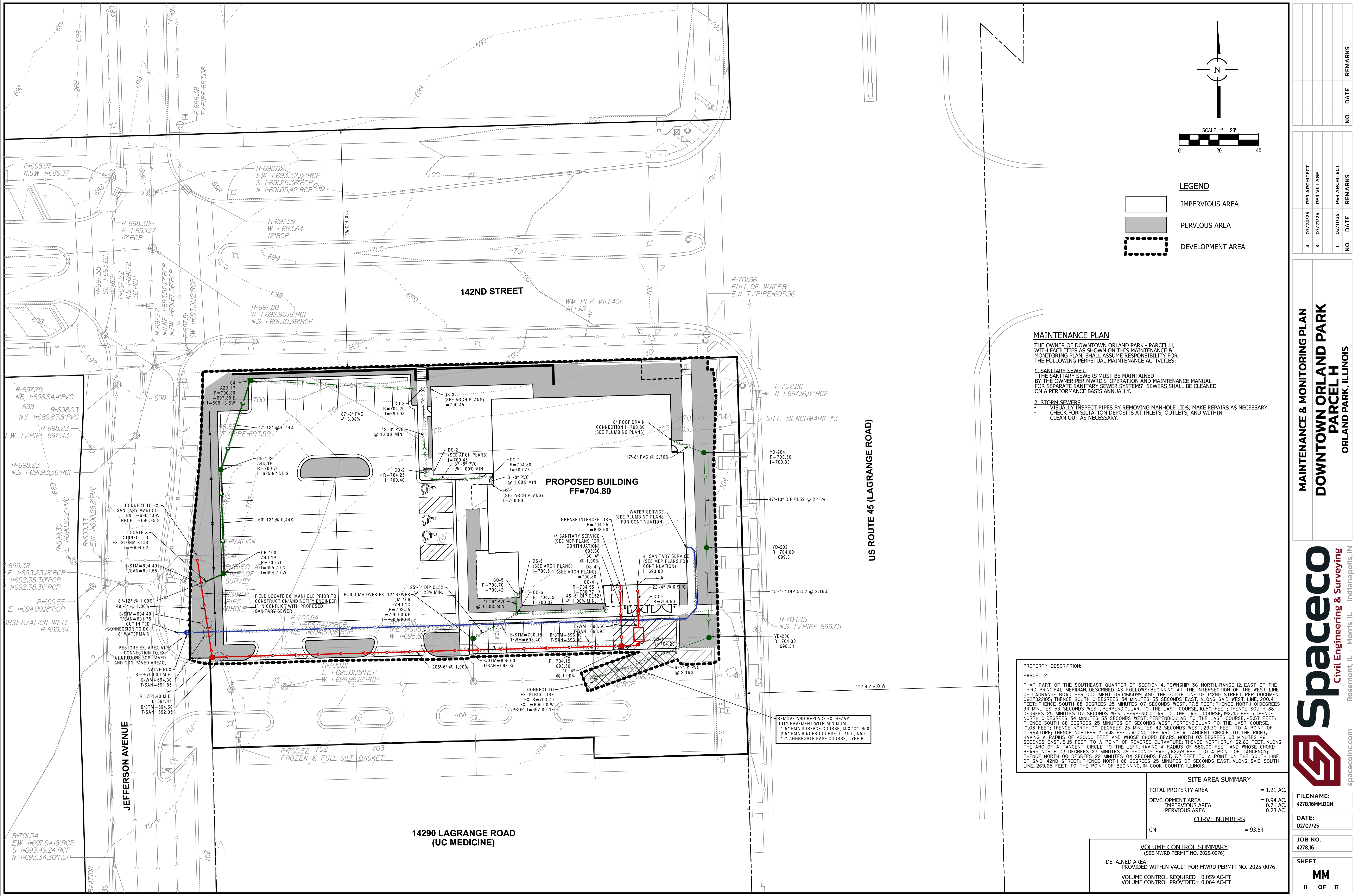
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3	07/21/25	PER VILLAGE
1	03/11/25	PER ARCHITECT

SOIL EROSION & SEDIMENT CONTROL PLAN - 3
DOWNTOWN ORLAND PARK
PARCEL H
ORLAND PARK, ILLINOIS

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JOB NO. 4278.16
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MAINTENANCE PLAN

THE OWNER OF DOWNTOWN ORLAND PARK - PARCEL H, WITH FACILITIES AS SHOWN ON THIS MAINTENANCE & MONITORING PLAN, SHALL ASSUME RESPONSIBILITY FOR THE FOLLOWING PERPETUAL MAINTENANCE ACTIVITIES:

- 1. SANITARY SEWER
 - THE SANITARY SEWERS MUST BE MAINTAINED BY THE OWNER PER MWRD'S OPERATION AND MAINTENANCE MANUAL FOR SEPARATE SANITARY SEWER SYSTEMS. SEWERS SHALL BE CLEANED ON A PERFORMANCE BASIS ANNUALLY.
- 2. STORM SEWERS
 - VISUALLY INSPECT PIPES BY REMOVING MANHOLE LIDS, MAKE REPAIRS AS NECESSARY.
 - CHECK FOR SILTATION DEPOSITS AT INLETS, OUTLETS, AND WITHIN.
 - CLEAN OUT AS NECESSARY.

PROPERTY DESCRIPTION:
PARCEL 2
THAT PART OF THE SOUTHEAST QUARTER OF SECTION 4, TOWNSHIP 36 NORTH, RANGE 12, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: BEGINNING AT THE INTERSECTION OF THE WEST LINE OF LAGRANGE ROAD PER DOCUMENT 063465099 AND THE SOUTH LINE OF 142ND STREET, PER DOCUMENT 067822005; THENCE SOUTH 03 DEGREES 34 MINUTES 53 SECONDS EAST, ALONG SAID WEST LINE 200.41 FEET; THENCE SOUTH 88 DEGREES 25 MINUTES 07 SECONDS WEST, 77.51 FEET; THENCE NORTH 03 DEGREES 34 MINUTES 53 SECONDS WEST, PERPENDICULAR TO THE LAST COURSE, 10.50 FEET; THENCE SOUTH 88 DEGREES 25 MINUTES 07 SECONDS WEST, PERPENDICULAR TO THE LAST COURSE, 192.43 FEET; THENCE NORTH 03 DEGREES 34 MINUTES 53 SECONDS WEST, PERPENDICULAR TO THE LAST COURSE, 46.57 FEET; THENCE SOUTH 88 DEGREES 25 MINUTES 07 SECONDS WEST, PERPENDICULAR TO THE LAST COURSE, 10.08 FEET; THENCE NORTH 00 DEGREES 25 MINUTES 42 SECONDS WEST, 23.30 FEET TO A POINT OF CURVATURE; THENCE NORTHERLY 51.8 FEET, ALONG THE ARC OF A TANGENT CIRCLE TO THE RIGHT, HAVING A RADIUS OF 422.00 FEET AND WHOSE CHORD BEARS NORTH 03 DEGREES 03 MINUTES 46 SECONDS EAST, 51.5 FEET TO A POINT OF REVERSE CURVATURE; THENCE NORTHERLY 62.62 FEET, ALONG THE ARC OF A TANGENT CIRCLE TO THE LEFT, HAVING A RADIUS OF 580.00 FEET AND WHOSE CHORD BEARS NORTH 03 DEGREES 27 MINUTES 39 SECONDS EAST, 62.62 FEET TO A POINT OF TANGENCY; THENCE NORTH 00 DEGREES 22 MINUTES 04 SECONDS EAST, 7.71 FEET TO A POINT ON THE SOUTH LINE OF SAID 142ND STREET; THENCE NORTH 88 DEGREES 25 MINUTES 07 SECONDS EAST, ALONG SAID SOUTH LINE, 269.65 FEET TO THE POINT OF BEGINNING, IN COOK COUNTY, ILLINOIS.

SITE AREA SUMMARY	
TOTAL PROPERTY AREA	= 1.21 AC.
DEVELOPMENT AREA	= 0.94 AC.
IMPERVIOUS AREA	= 0.21 AC.
PERVIOUS AREA	= 0.23 AC.
CURVE NUMBERS	
CN	= 93.54

VOLUME CONTROL SUMMARY (SEE MWRD PERMIT NO. 2025-0076)	
DETAINED AREA: PROVIDED WITHIN VAULT FOR MWRD PERMIT NO. 2025-0076	
VOLUME CONTROL REQUIRED=	0.059 AC-FT
VOLUME CONTROL PROVIDED=	0.064 AC-FT

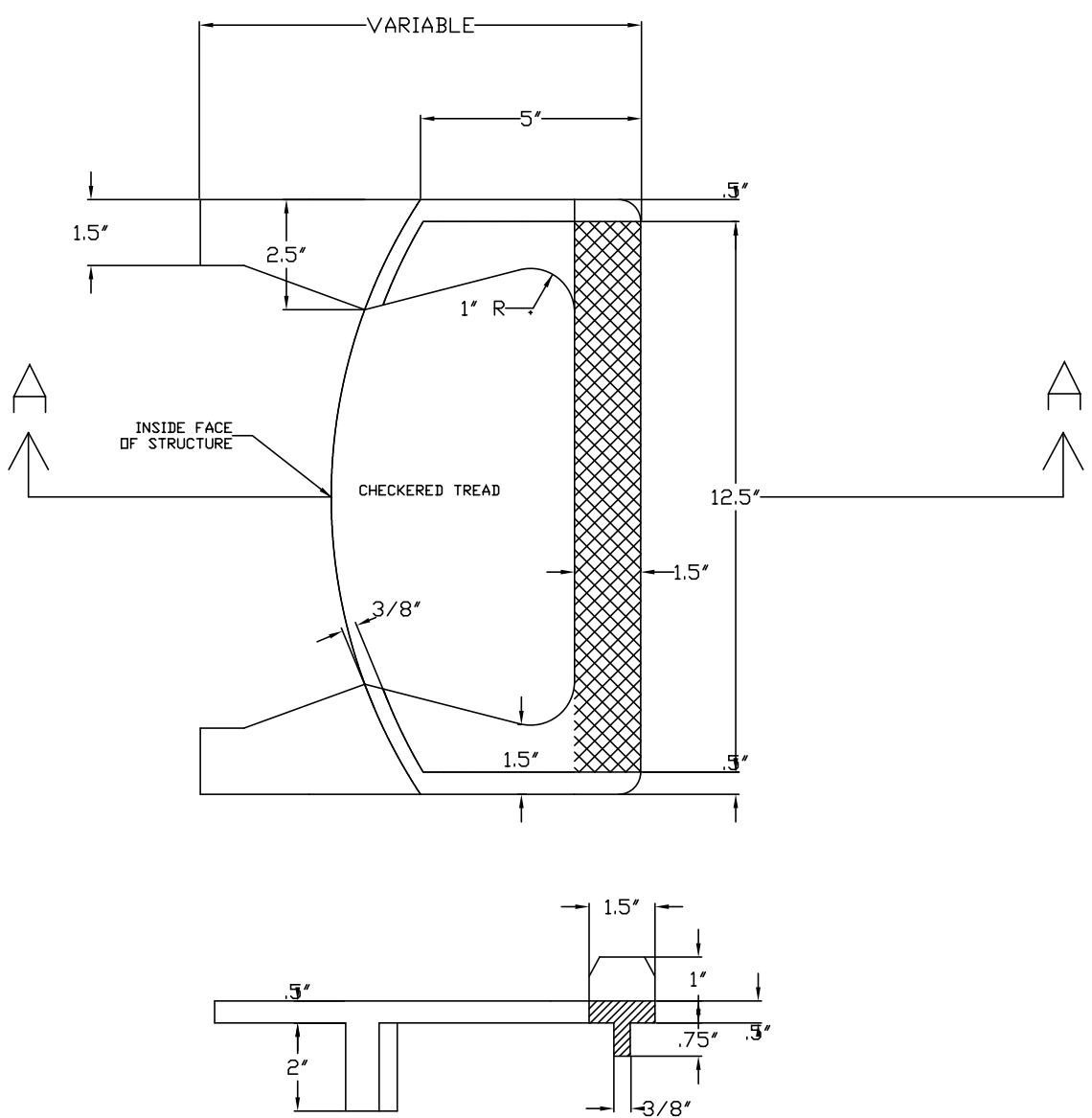
MAINTENANCE & MONITORING PLAN
DOWNTOWN ORLAND PARK
PARCEL H
ORLAND PARK, ILLINOIS



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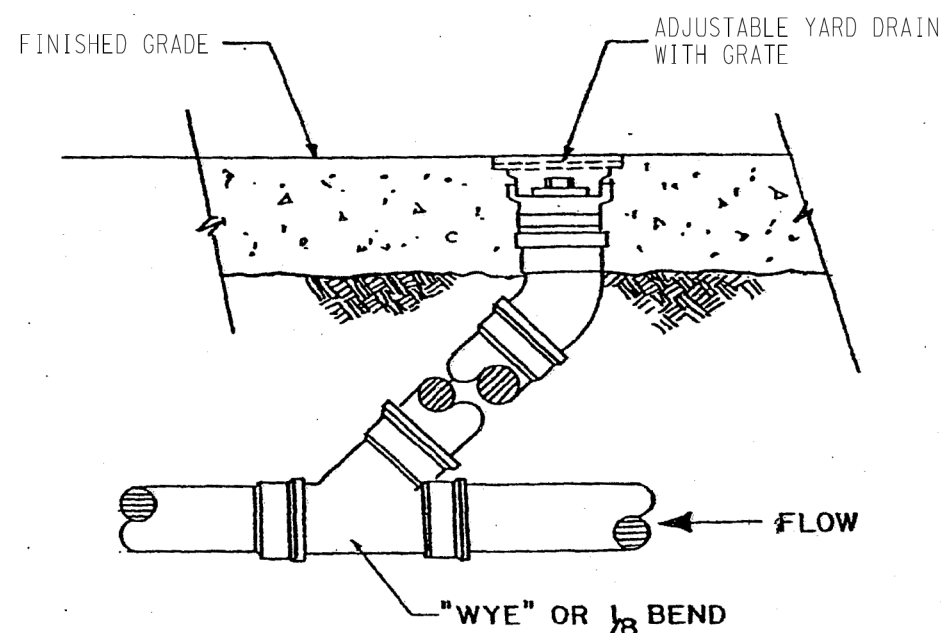
EARTHWORK NOTES		PAVING NOTES	SANITARY SEWER NOTES	STORM SEWER NOTES
1. GENERAL A. IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE SOIL AND GROUNDWATER CONDITIONS AT THE SITE. THE CONTRACTOR SHALL OBTAIN AND READ THE GEOTECHNICAL REPORTS AVAILABLE FROM THE OWNER. B. ANY QUANTITIES IN THE BID 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.		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-1567 (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 SHALL 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 0.4 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.	1. GENERAL A. SANITARY SEWER PIPE SHALL BE PVC (POLYVINYL CHLORIDE) PLASTIC PIPE WITH A STANDARD DIMENSION RATIO (SDR) OF 38 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", "FERNOCO", 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. WATERMANS 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 SHELVE 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 #7 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-8 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-8) AND THOROUGHLY MECHANICALLY COMPACTED IN 8" 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 10" O.C. SIMILAR TO NEENAH R-1890. 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-869. 8. TELEVISION: A. ALL SANITARY SEWERS SHALL BE TELEVIEWED 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. IF THE SANITARY SEWER INSTALLATION FAILS TO MEET THE TEST REQUIREMENTS SPECIFIED, THE CONTRACTOR SHALL DETERMINE THE CAUSE OR CAUSES OF THE DEFECT AND SHALL, AT HIS OWN EXPENSE, REPAIR OR REPLACE ALL MATERIALS, AND WORKMANSHIP AS MAY BE NECESSARY TO COMPLY WITH THE TEST REQUIREMENTS. 10. CERTIFICATION: A. CONTRACTOR SHALL SUBMIT CERTIFIED COPIES OF ALL REPORTS OF TESTS CONDUCTED BY AN INDEPENDENT LABORATORY BEFORE INSTALLATION OF PVC PLASTIC PIPE. TESTS SHALL BE CONDUCTED IN ACCORDANCE WITH STANDARD METHOD OF TEST FOR "EXTERNAL LOADING PROPERTIES OF PLASTIC PIPE BY PARALLEL PLATE LOADING". ASTM STANDARDS D-2412 OR D-2241 AS APPROPRIATE FOR THE PIPE TO BE USED. TESTS SHALL ALSO BE CONDUCTED TO DEMONSTRATE JOINT PERFORMANCE AT 5% MAXIMUM DIAMETRIC DEFLECTION OF THE SPIGOT. 11. RECORD DRAWINGS: A. THE CONTRACTOR SHALL PROVIDE ALL INFORMATION TO PREPARE RECORD DRAWING(S) INCLUDING SERVICE STOP LOCATIONS, TO SPACECO. SPACECO SHALL PREPARE RECORD DRAWINGS AND SUBMIT TO APPROPRIATE PUBLIC AGENCIES. IF FINAL MEASUREMENTS INDICATE DEFICIENCIES, THE CONTRACTOR, AT HIS OWN COST, WILL ADJUST MANHOLES AND/OR SEWERS TO PROPER ELEVATIONS AND OTHERWISE CORRECT THE DEFICIENCIES.	2. BEDDING: A. ALL STORM SEWERS SHALL BE INSTALLED ON A TYPE A GRANULAR BEDDING, 1/4" TO 3/4" IN SIZE (CA-13) WITH A MINIMUM THICKNESS EQUAL TO 1/4 THE OUTSIDE DIAMETER OF THE SEWER PIPE BUT NOT LESS THAN 4". BLOCKING OF ANY KIND FOR GRADE IS NOT PERMITTED. THE BEDDING MATERIALS SHALL BE COMPACTED TO 90% OF MODIFIED PROCTOR DENSITY. BEDDING SHALL EXTEND TO THE SPRINGLINE ON ALL RCP AND DIP PIPE. BEDDING SHALL BE CONSIDERED INCIDENTAL TO THE COST OF PIPE. NO SEPARATE PAYMENT SHALL BE MADE FOR THIS. 3. STRUCTURES: A. MANHOLE, CATCH BASIN AND INLET BOTTOMS SHALL BE PRECAST CONCRETE SECTIONAL UNITS OR MONOLITHIC CONCRETE. MANHOLES AND CATCH BASINS SHALL BE A MINIMUM 4" IN DIAMETER UNLESS OTHERWISE SPECIFIED ON THE PLANS. STRUCTURE JOINTS SHALL BE SEALED WITH O-RING OR BUTYL ROPE. A MAXIMUM OF EIGHT (8) INCHES OF ADJUSTING RINGS SHALL BE USED. B. A CONCRETE BENCH TO DIRECT FLOWS SHALL BE CONSTRUCTED IN THE BOTTOM OF ALL INLETS AND MANHOLES. C. THE FRAME, GRATE, AND/OR CLOSED LID SHALL BE CAST IRON OF THE STYLE SHOWN ON THE PLANS. D. MANHOLE LIDS SHALL BE MACHINE SURFACED, NON-ROCKING DESIGN. THE CLOSED LIDS SHALL HAVE THE WORD "STORM" CAST ON THE LID. THE JOINTS BETWEEN CONCRETE SECTION ADJUSTING RINGS, AND FRAME SHALL BE SEALED WITH A MASTIC COMPOUND. 4. FRENCH DRAIN: A. ALL LOW POINT STORM STRUCTURES ARE TO HAVE FOUR 1" DIAMETER WEEP HOLES PROVIDED 24" BELOW THE TOP OF LID. THE HOLES SHALL BE COVERED WITH A GEOTEXTILE FILTER FABRIC CEMENTED IN PLACE WITH BITUMINOUS MASTIC. THE DRAIN SHALL BE BACKFILLED WITH BEDDING OR CA-7 CRUSHED STONE TO TOP OF SUBGRADE OR BOTTOM OF TOPSOIL. 5. CASTINGS: A. CASTINGS FOR SEWER OR OTHER STRUCTURES SHALL BE "NEENAH" OR APPROVED EQUAL. COST OF CASTINGS SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE STRUCTURE. NO SEPARATE PAYMENT SHALL BE MADE FOR THIS ITEM. 6. CLEANING: A. THE STORM SEWER SYSTEM SHALL BE THOROUGHLY CLEANED PRIOR TO FINAL INSPECTION AND TESTING. 7. TELEVISION: A. THE STORM SEWER SYSTEM SHALL BE TELEVIEWED IF REQUIRED BY MUNICIPALITY.
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 729/801 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.		3. CONCRETE WORK A. ALL EXTERIOR CONCRETE SHALL BE PORTLAND CEMENT CONCRETE CLASS 50 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 Bb OF COLLATED, FILLBRATED, 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. PREMOULDED 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 PCS, 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" PREMOULDED 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 12" PREMOULDED FIBER EXPANSION JOINTS AT 50 FOOT INTERVALS, AND 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 WATER, POWER 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.	1. GENERAL: A. ALL STORM SEWER PIPE SHALL BE RCP, UNLESS OTHERWISE NOTED ON THE PLANS, IN ACCORDANCE WITH THE FOLLOWING: PLAN CODE: MATERIAL RCP: REINFORCED CONCRETE PIPE (ASTM C-76) WITH O-RING GASKETED JOINTS. (ASTM C-440); TYPE 1, CLASS IV PER SSRBC SECTION 801. ELIPTICAL RCP PIPE SHALL BE TYPE 1, H-2111 PER SSRBC SECTION 911. PRECAST FLARED END SECTIONS MAY HAVE MASTIC JOINTS, PAYMENTS SHALL BE MADE AT THE CONTRACT UNIT PRICE PER LINEAL FOOT OF STORM SEWER COMPLETE IN PLACE. DIP: DUCTILE IRON WATERMAIN QUALITY PIPE CLASS 52 (ANSI 21.51) WITH MECHANICAL OR PUSH-ON JOINTS (ANSI 21.11). CEMENT LINING IS NOT REQUIRED. PVC: POLYVINYL CHLORIDE SEWER PIPE, SDR 26, CONFORMING TO ASTM D-3034 WITH ASTM D-3212 PUSH-ON GASKETED JOINTS. HDP: HIGH DENSITY POLYETHYLENE CORRUGATED PIPE WITH SMOOTH INTERIOR MEETING ASHSTO M-294 SUCH AS ADS N-12 BY ADVANCED DRAINAGE SYSTEM, COLUMBUS, OH; OR H-10 BY HANCOX, FINDLEY, OH. JOINTS SHALL BE SPLIT CORRUGATED BANDS BY THE PIPE MANUFACTURER. UD: RIGID, PERFORATED PVC UNDERDRAIN PIPE (ASTM D-2729), SDR 35, OR SCHEDULE 40, WITH SOLVENT WELD JOINTS AND FILTER FABRIC WRAPPING OR SOCK. PERFORATED HDPE PIPE ALSO ACCEPTABLE. B. "BAND SEAL" OR SIMILAR COUPLINGS SHALL BE USED WHEN JOINING SEWER PIPES OF DISSIMILAR MATERIALS. "BAND SEAL", "FERNOCO", AND "MISSION" TYPE COUPLINGS SHALL NOT BE USED ON SEWER MAINS. CHANGES IN PIPE MATERIAL SHALL BE MADE AT A STRUCTURE. C. ALL STORM SEWERS ARE TO BE CONSTRUCTED USING A LASER INSTRUMENT TO MAINTAIN LINE AND GRADE. D. ALL FOOTING DRAIN AND SUMP PUMP DISCHARGE PIPES SHALL BE CONNECTED TO THE STORM SEWER SYSTEM. DOWNSPOUTS SHALL DISCHARGE TO THE GROUND. E. THE CONTRACTOR SHALL MAINTAIN AT LEAST THREE (3) FEET OF COVER OVER THE TOP OF SHALLOW PIPES AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL MOUND OVER ANY PIPES WHICH HAVE LESS THAN THREE (3) FEET OF COVER D	



SECTION A-A
CAST IRON STEPS

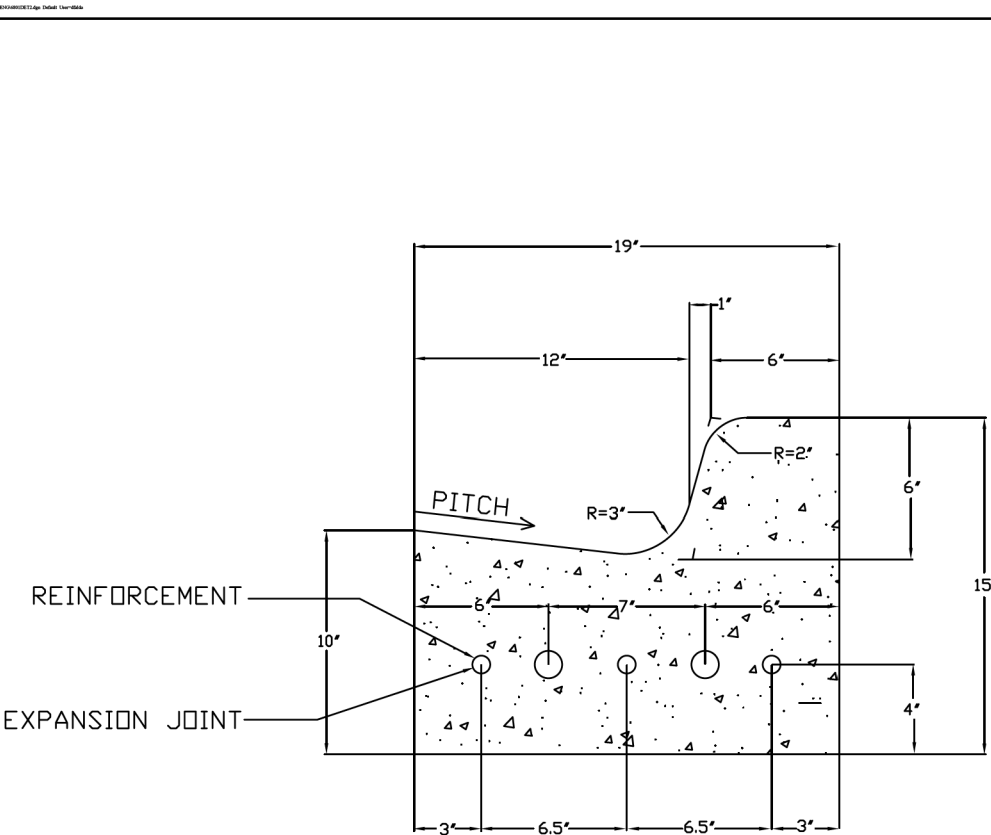
NOTES:
1. STEPS SHALL BE EMBEDDED INTO THE WALL A MINIMUM OF 5 DECKS. STEPS SHALL NOT BE EXTENDED ON THE OUTSIDE.
2. CAST IRON STEPS SHALL BE GRAY IRON CONFORMING TO THE REQUIREMENTS OF ARTICLE 710.7 OF THE STANDARD SPEC.
3. STEEL REINFORCED PLASTIC, MANHOLE STEPS SHALL BE MADE WITH AN IMPROVED PLASTIC SUCH AS COPOLYMER POLYPROPYLENE MEETING WITH THE REQUIREMENTS OF ASTM DESIGNATION 2344 TYPE II, GRADE 400B, REINFORCED WITH A DEFORMED 3/8 INCH DIAMETER REINFORCING BAR WHICH CONFORMS TO THE REQUIREMENTS OF ASTM DESIGNATION A-615 GRADE 66.

CATCH BASIN-TYPE A STEP DETAIL		
SYNOPSIS/NO.	STORM SEWER IMPROVEMENT	DATE:
DRAWN BY:		REVISION:
	Village of ORLAND PARK	REVISION:
	Engineering Department	REVISION:
		STS-03



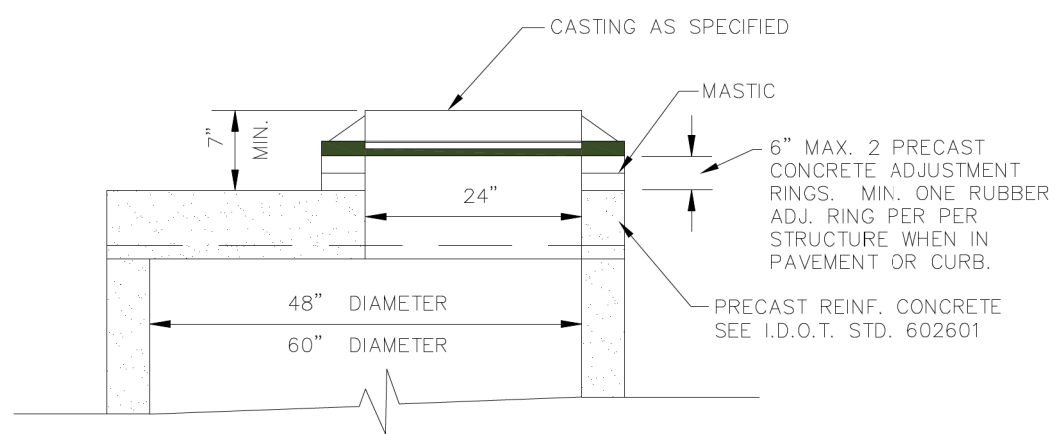
TYPICAL YARD DRAIN DETAIL
NOT TO SCALE

PROVIDE WATERTIGHT CONNECTION CONFORMING TO ASTM C-923



- NOTES:
1. REINFORCEMENT SHALL BE THREE (3) #5 REINFORCING BARS CONTINUOUS BETWEEN EXPANSION JOINTS, WITH LOCATION SPACING AS INDICATED ABOVE.
2. EXPANSION JOINT: 3/4" THICK BITUMINOUS FILLER MATERIAL- PROVIDE TWO (2) #6 X 24" SMOOTH BARS WITH EXPANSION CAPS AT EACH EXPANSION JOINT. INSTALL AT ENDS OF ALL RADII AND NO FURTHER THAN SIXTY (60') FEET APART. SAW THREE (3) EQUALLY SPACED CONTRACTION JOINTS AT TWENTY (20') FEET INTERVALS BETWEEN EXPANSION JOINTS. CONTRACTION JOINTS SHALL BE SAW-CUT IN THE UPPER ONE-THIRD OF CURB AND GUTTER WITHIN 3 DAYS OF PLACEMENT.
3. COST OF BARS SHALL BE INCLUDED IN THE UNIT PRICE (PER LINEAL FOOT) FOR CURB AND GUTTER.

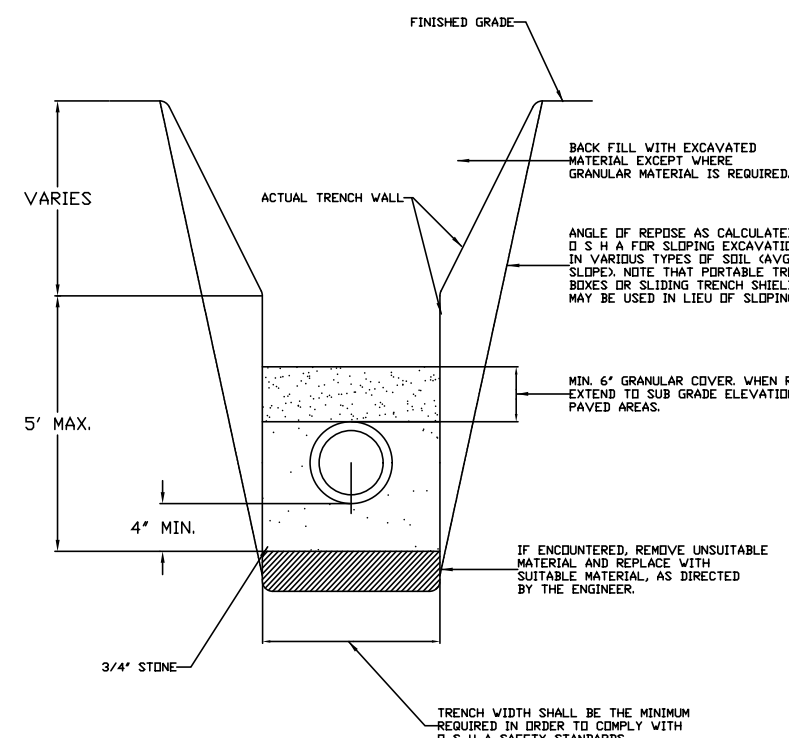
B - 6.12 CURB AND GUTTER		
SYNOPSIS/NO.	STREET & PAVEMENT	DATE:
DRAWN BY:		REVISION:
	Village of ORLAND PARK	REVISION:
	Engineering Department	REVISION:
		STR-04



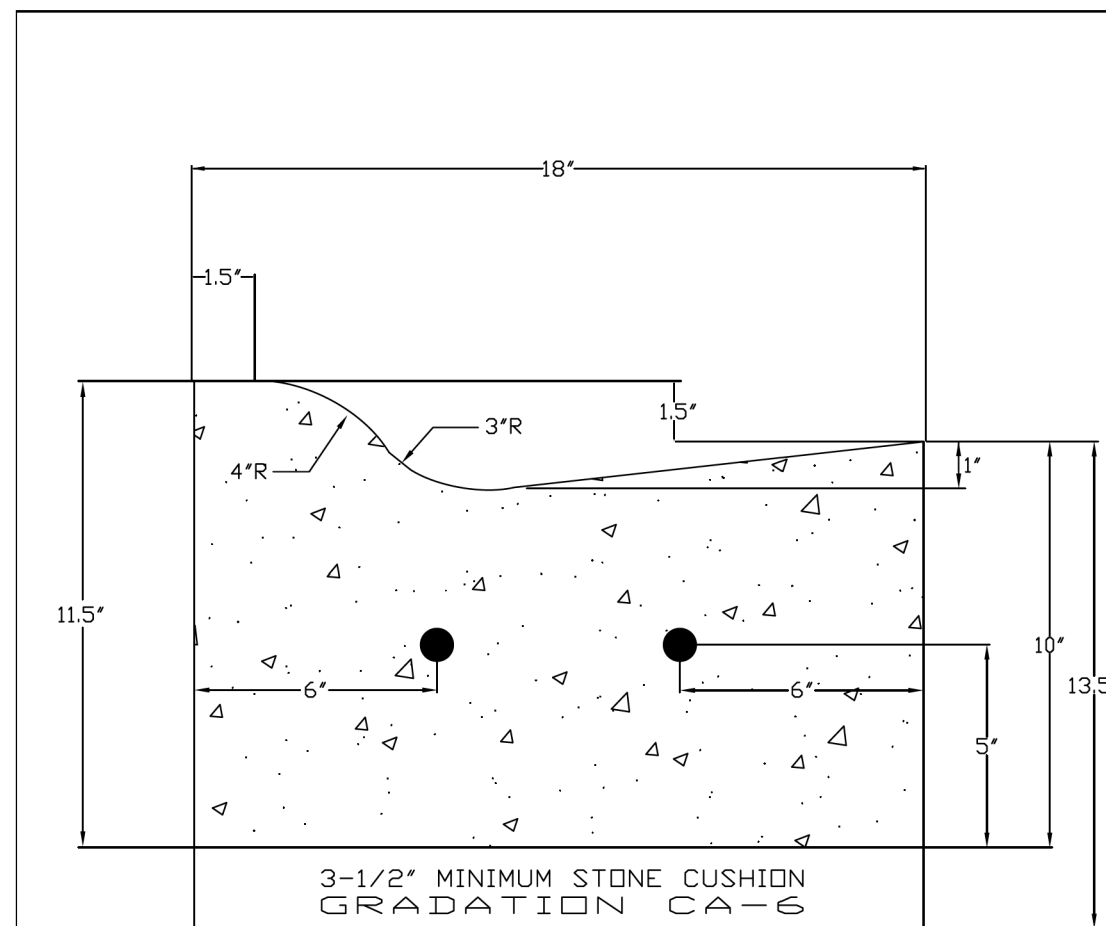
NOTES:

- Adjustment: Any structure located within pavement shall require the use of at least one (1) rubber adjustment riser, Infra-Riser brand or approved equal, and, if necessary, said riser shall be of the tapered type in order to match the proposed grade of the roadway. No more than two (2) precast concrete adjusting rings with six (6) inch maximum height adjustment shall be allowed. Adjustments within pavement that are less than three (3) inches in height shall consist of only rubber adjustment riser(s). The minimum thickness of a rubber adjustment riser shall be one (1) inch. Adjustments within pavement greater than three (3) inches in height shall use a minimum three (3) inch precast concrete riser for the lower riser, and the final riser shall be of the rubber type.
- Sealing: All non-rubber mating surfaces, exterior joints of frames, adjustment riser(s), flat slab top or cone section (if applicable) and structure section shall be sealed with a uniform application of bituminous mastic sealant. The mating surfaces of all rubber adjustment risers shall be sealed with the manufacturer's recommended sealant for rubber adjustment risers. If multiple adjustment risers are required, a continuous application of sealant shall be applied between each unit. Interior surfaces shall be sealed with concrete mortar or epoxy mortar. Concrete mortar or epoxy mortar will not be used on mating surfaces as a sealant between adjustment risers, structure sections or frames.

FLAT SLAB TOP		
SYNOPSIS/NO.	STORM SEWER IMPROVEMENT	DATE:
DRAWN BY:		REVISION:
	Village of ORLAND PARK	REVISION:
	Engineering Department	REVISION:
		STS-06



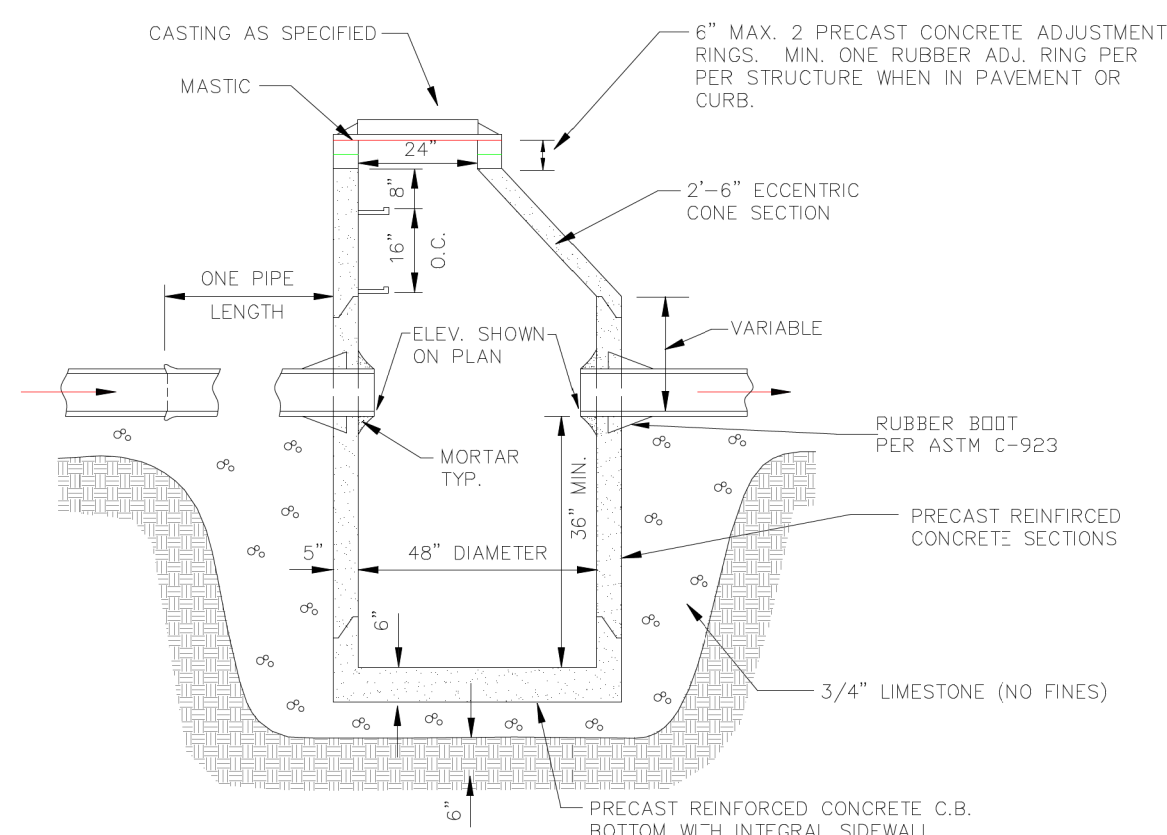
TRENCH SECTION (STORM SEWER)		
SYNOPSIS/NO.	STORM SEWER IMPROVEMENT	DATE:
DRAWN BY:		REVISION:
	Village of ORLAND PARK	REVISION:
	Engineering Department	REVISION:
		STS-11



NOTES:

- REINFORCEMENT: PROVIDE TWO (2) #4 REINFORCING BARS CONTINUOUS BETWEEN EXPANSION JOINTS, WITH LOCATION SPACING AS INDICATED ABOVE.
- EXPANSION JOINT: 3/4" THICK BITUMINOUS FILLER MATERIAL- PROVIDE TWO (2) #6 X 24" SMOOTH BARS WITH EXPANSION CAPS AT EACH EXPANSION JOINT. INSTALL AT ENDS OF ALL RADII AND NO FURTHER THAN SIXTY (60') FEET APART.
- SAW THREE (3) EQUALLY SPACED CONTRACTION JOINTS AT TWENTY (20') FEET INTERVALS BETWEEN EXPANSION JOINTS. CONTRACTION JOINTS SHALL BE SAW-CUT IN THE UPPER ONE-THIRD OF CURB AND GUTTER WITHIN 3 DAYS OF PLACEMENT.
- COST OF BARS SHALL BE INCLUDED IN THE UNIT PRICE (PER LINEAL FOOT) FOR CURB AND GUTTER.

CURB AND GUTTER DETAIL (RESIDENTIAL)		
SYNOPSIS/NO.	STREET & PAVEMENT	DATE:
DRAWN BY:		REVISION:
	Village of ORLAND PARK	REVISION:
	Engineering Department	REVISION:
		STR-03



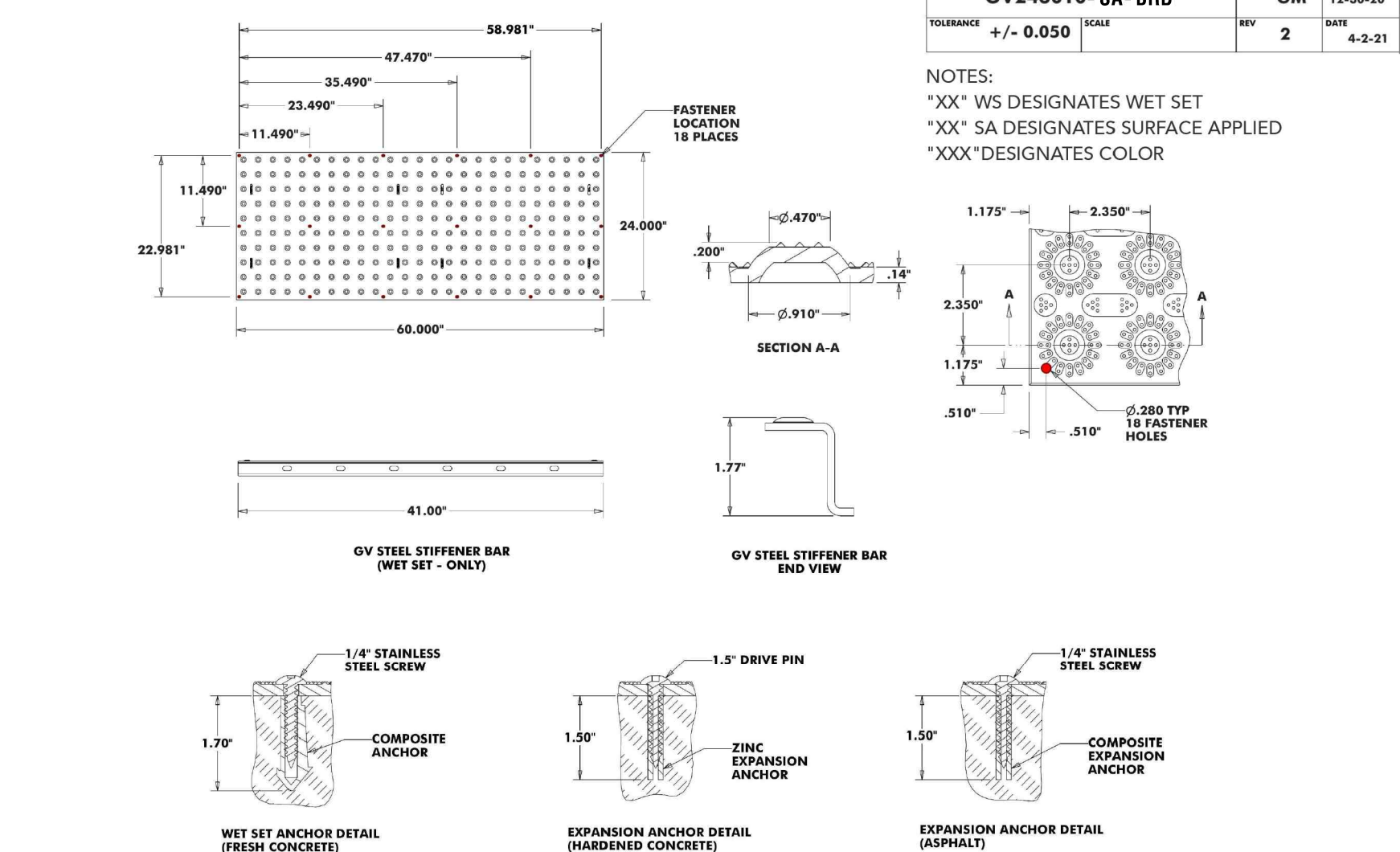
NOTES:

- Adjustment: Any structure located within pavement shall require the use of at least one (1) rubber adjustment riser, Infra-Riser brand or approved equal, and, if necessary, said riser shall be of the tapered type in order to match the proposed grade of the roadway. No more than two (2) precast concrete adjusting rings with six (6) inch maximum height adjustment shall be allowed. Adjustments within pavement that are less than three (3) inches in height shall consist of only rubber adjustment riser(s). The minimum thickness of a rubber adjustment riser shall be one (1) inch. Adjustments within pavement greater than three (3) inches in height shall use a minimum three (3) inch precast concrete riser for the lower riser, and the final riser shall be of the rubber type.
- Pipe and frame seals: All pipe connection openings shall be precast with resilient rubber water tight pipe to manhole sleeves or seals conforming to ASTM C-923. Adapter chimney seal with twelve (12) inch sleeve type shall extend from the manhole cone to the manhole frame for all structures in the right-of-way.
- Sealing: All mating surfaces of adjustment riser(s), structure sections, and frames shall be sealed with a mastic sealant. No concrete mortar or epoxy shall be allowed as a sealant for adjustment risers, structure sections or frames. If multiple adjustment risers are required, a continuous application of sealant shall be applied between each unit.
- All bottom sections shall be monolithically precast including bases and invert flowlines.
- Provide CA-6 aggregate backfill around catch basin to subgrade elevation in paved areas for subgrade.

CATCHBASIN TYPE A		
SYNOPSIS/NO.	STORM SEWER IMPROVEMENT	DATE:
DRAWN BY:		REVISION:
	Village of ORLAND PARK	REVISION:
	Engineering Department	REVISION:
		STS-02

TUFTILE SPECIFICATION AT VILLAGE REQUEST

24" X 60" X 10 GA (REPLACEABLE) GALVANIZED STEEL DETECTABLE WARNING TILE 2.350 DOME SPACING

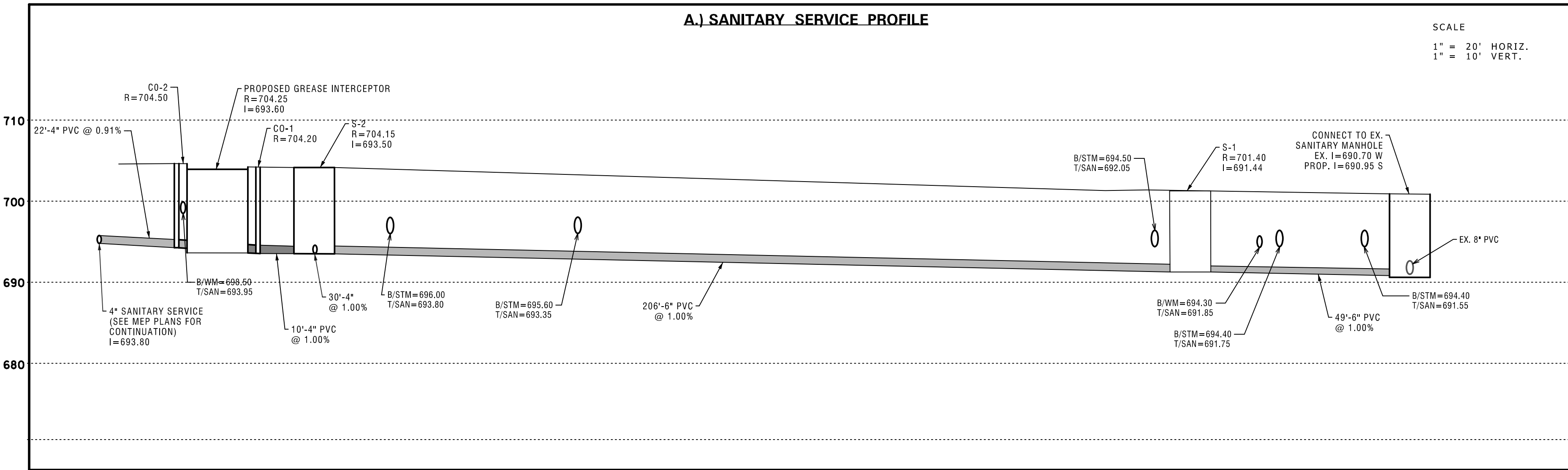


NOTE: TUFTILE TO BE GALVANIZED AND COLOR RED PER VILLAGE REQUEST

1-888-960-8897 905 Telser Road, Lake Zurich, IL 60047

TufTile.com

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SCALE
1" = 20' HORIZ.
1" = 10' VERT.

DETAILS - 1
DOWNTOWN ORLAND PARK
PARCEL H
ORLAND PARK, ILLINOIS

Spaceco
Civil Engineering & Surveying
Rosemont, IL - Morris, IL - Indianapolis, IN

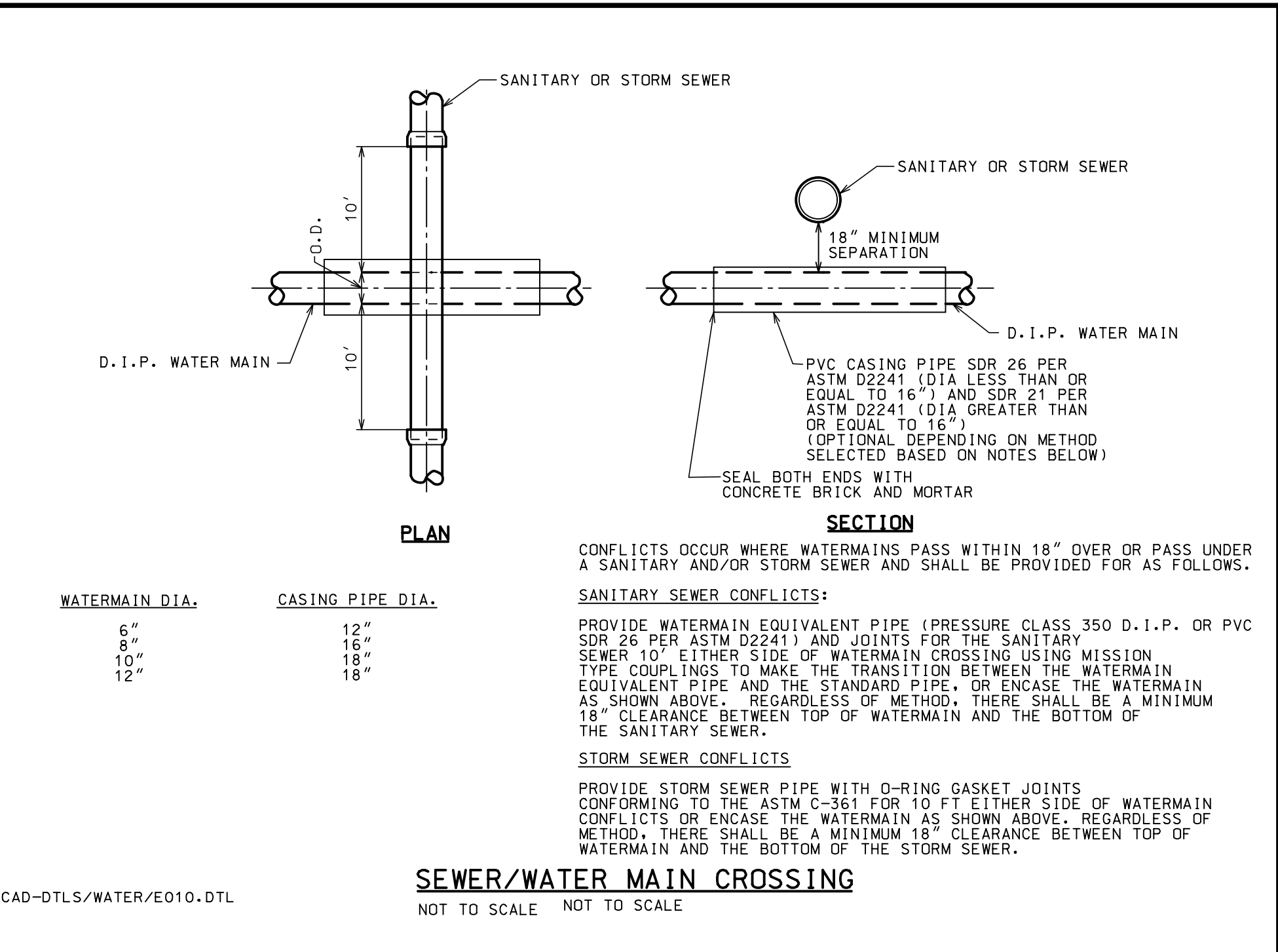
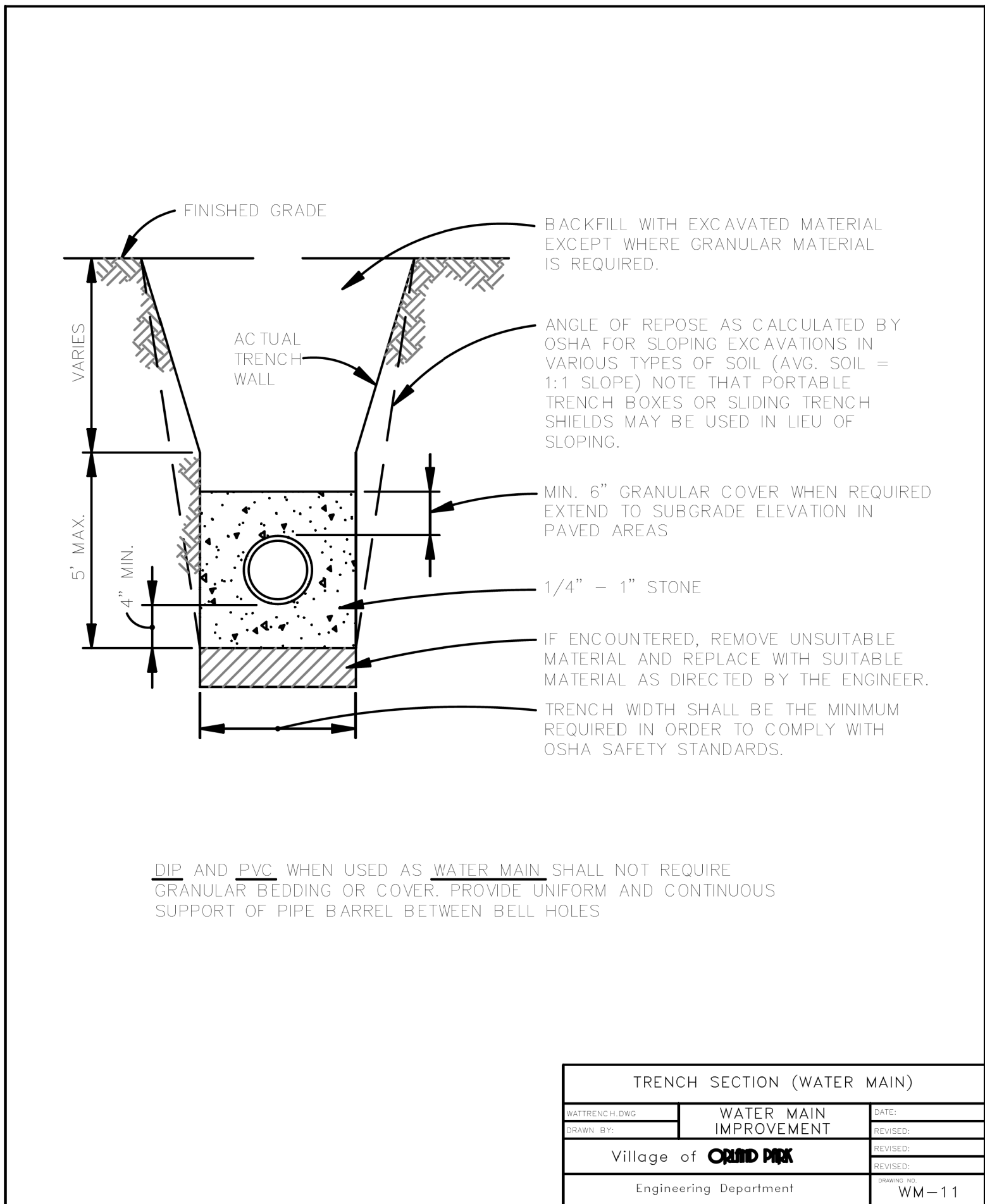
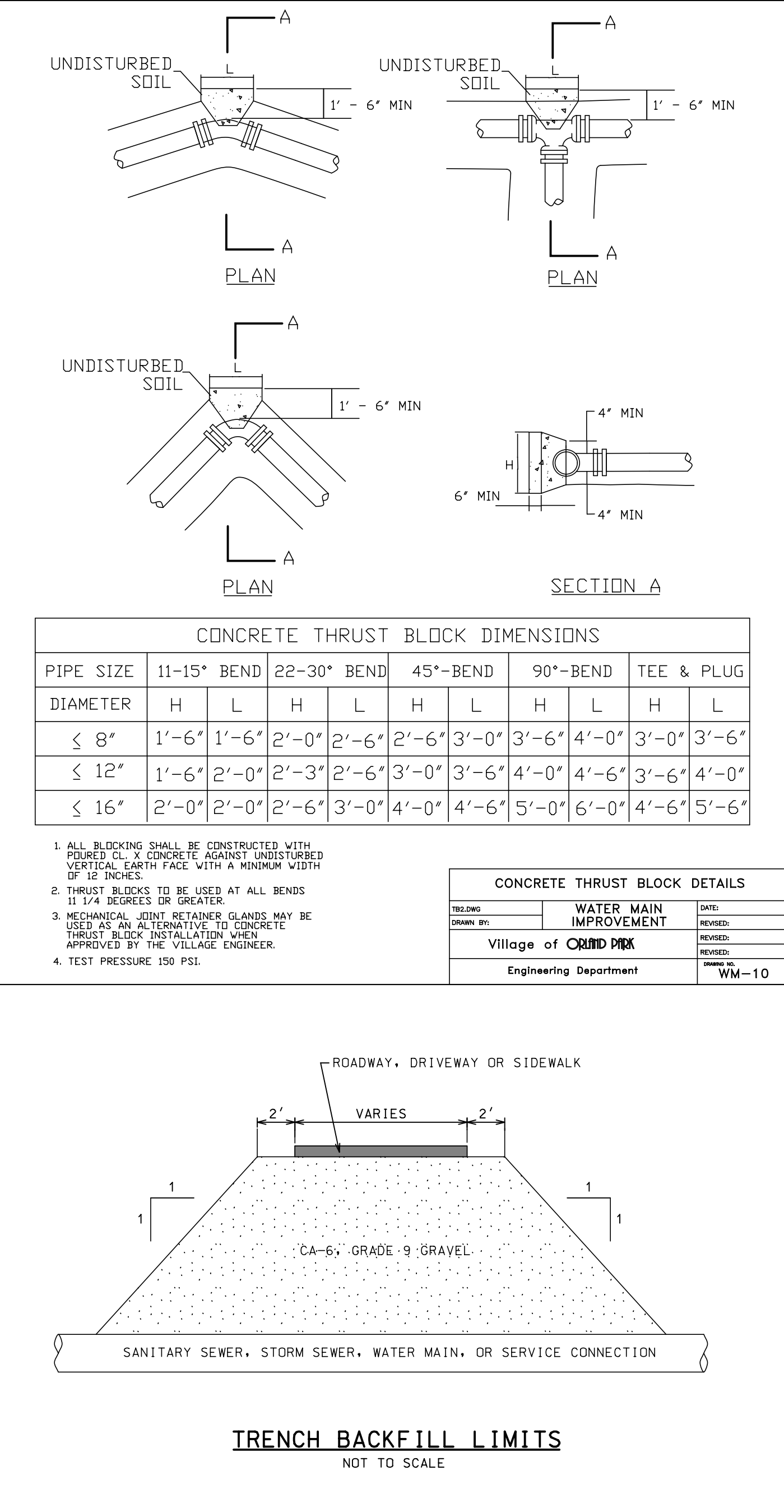
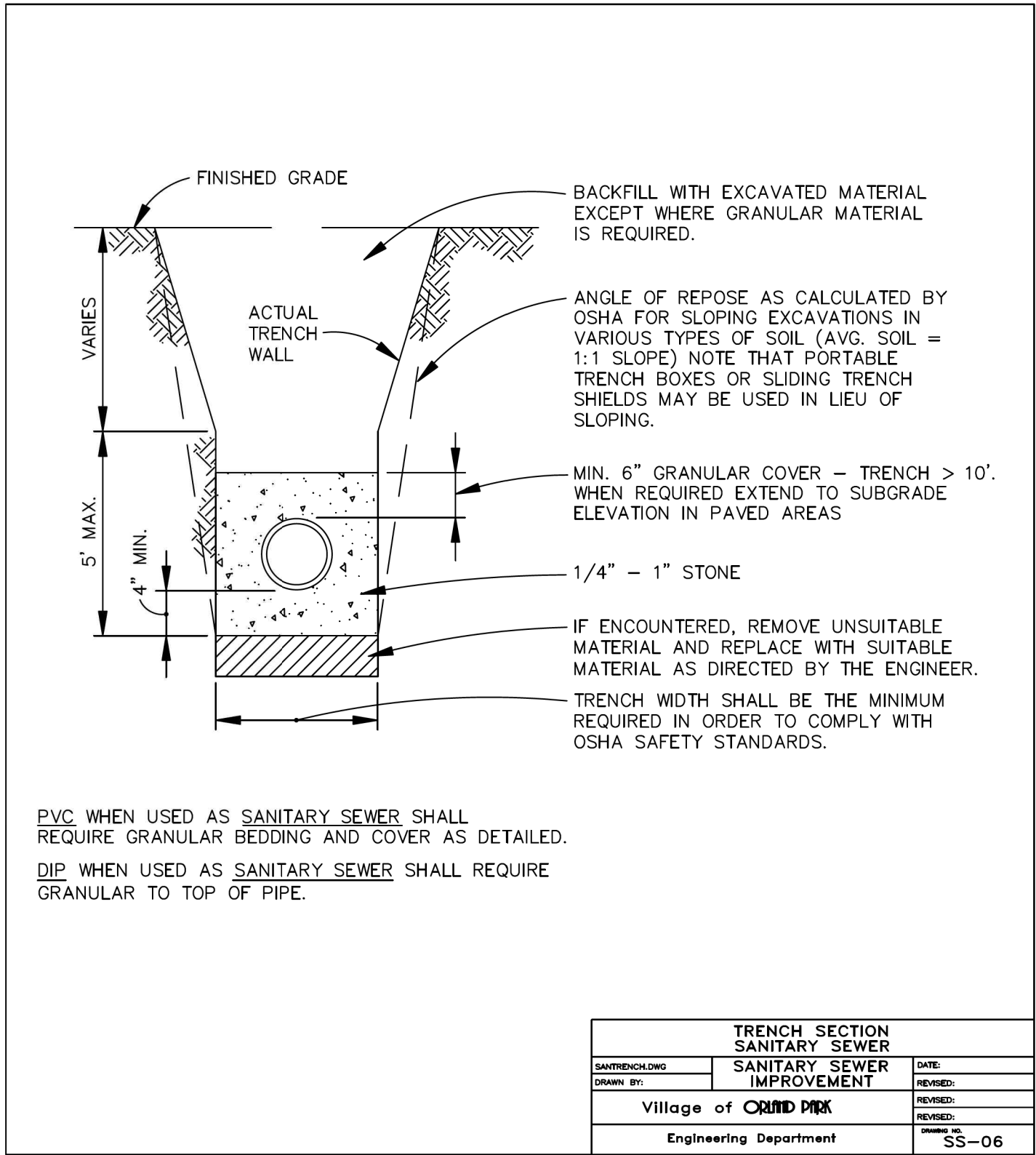
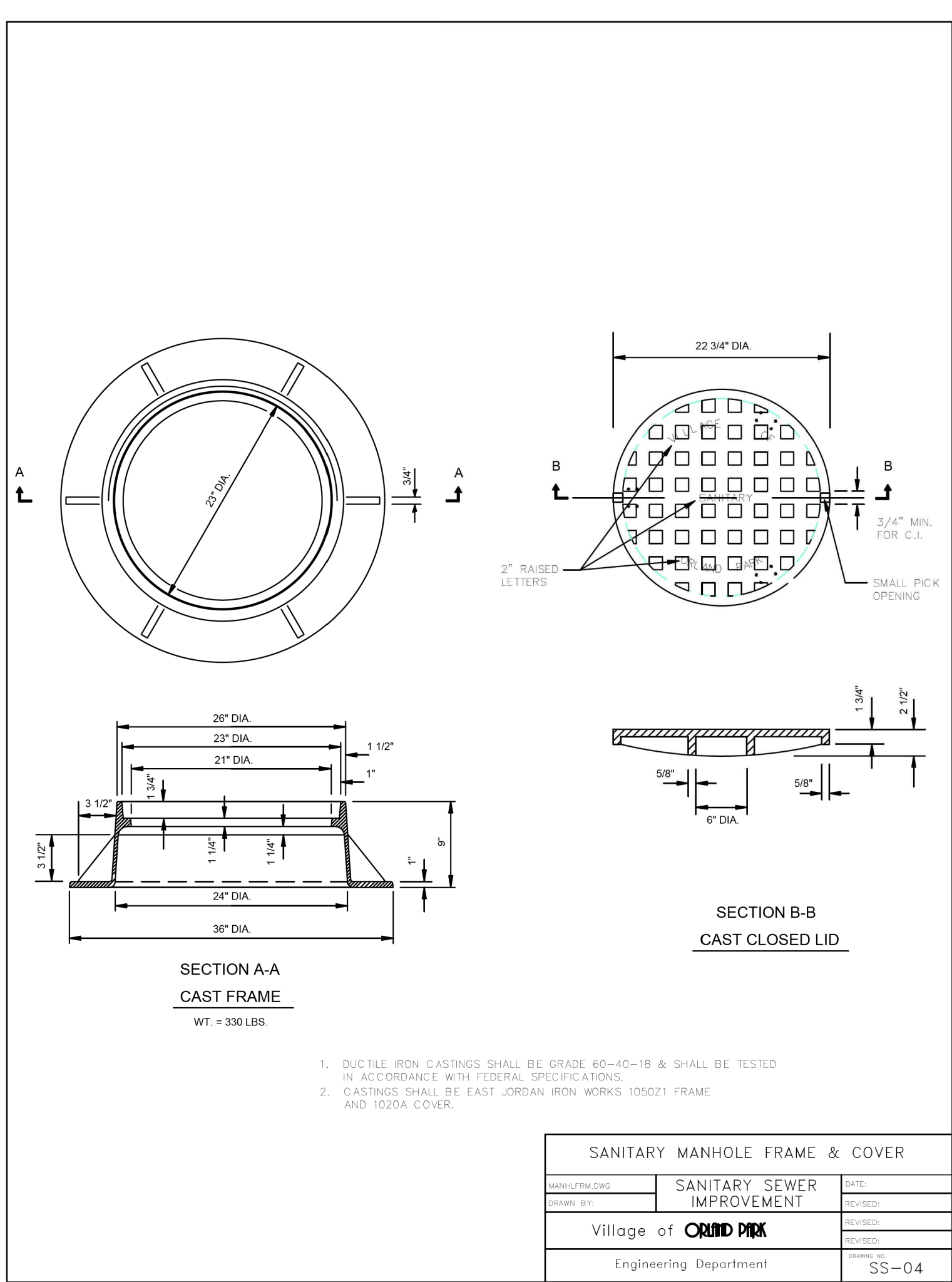
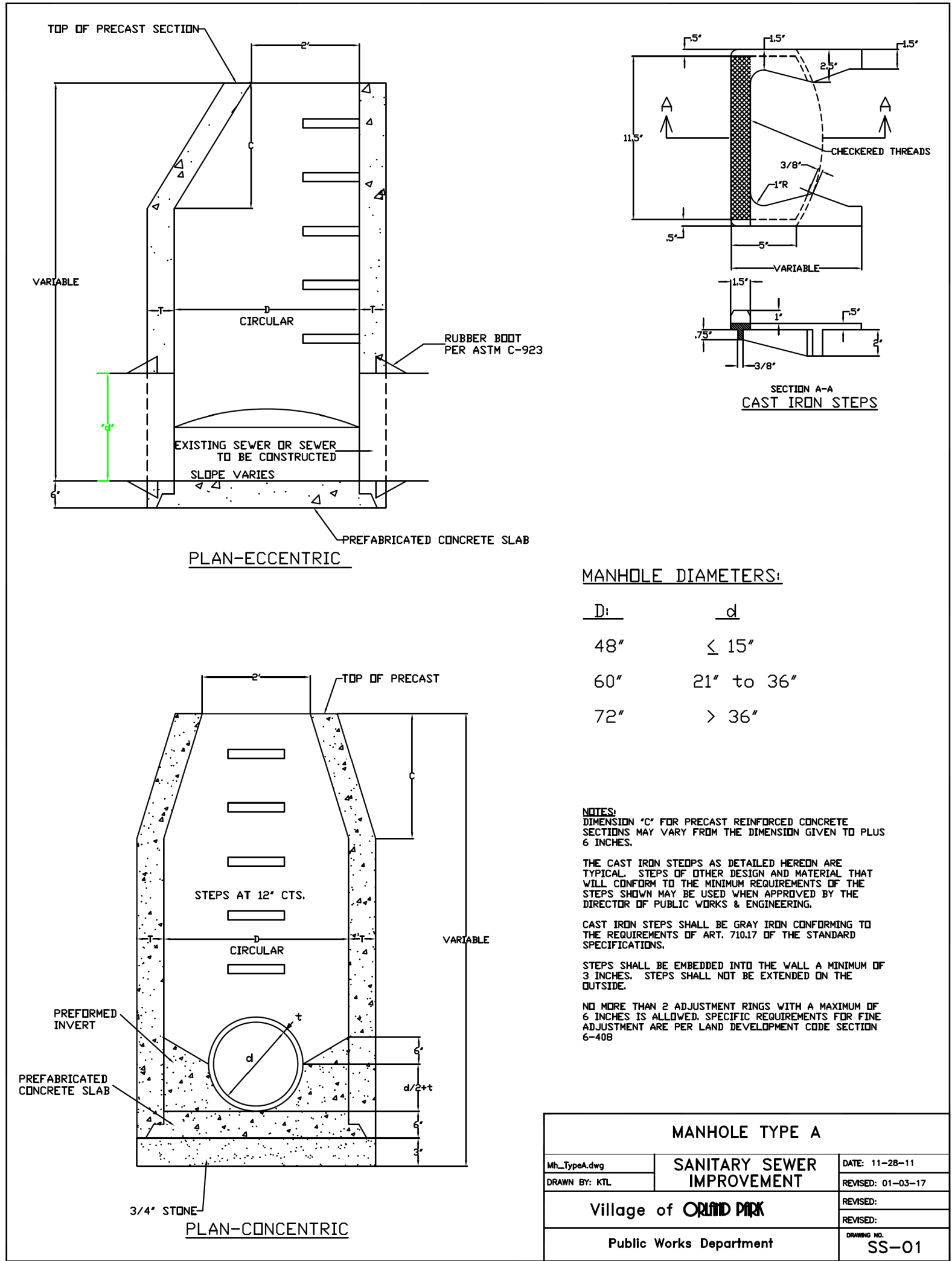


FILENAME:
4278.16D1.DGN

DATE:
02/07/25

JOB NO.
4278.16

SHEET
D1
14 OF 17



ABBREVIATIONS

NOTE: NOT ALL ITEMS MAY BE USED.

ACCU	AIR COOLED CONDENSING UNIT
A/C	AIR CONDITIONING
ACU	AIR CONDITIONING UNIT
AC	ALTERNATING CURRENT
AD	ACCESS DOOR
ADA	AMERICAN DISABILITIES ACT
ADJ	ADJUSTABLE
AF	AMP FUSE
AFF	ABOVE FINISHED FLOOR
AHJ	AUTHORITY HAVING JURSDICTION
AHU	AIR HANDLING UNIT
AL	ALUMINUM
AMP	AMPERE (AMP, AMPS)
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
AP	ACCESS PANEL
APPROX	APPROXIMATE (E), (ELY)
ARCH	ARCHITECT
AWG	AMERICAN WIRE GAUGE
BB	BASEBOARD
BLDG	BUILDING
BOT	BOTTOM
CB	CIRCUIT BREAKER
C/T	CURRENT TRANSFORMER
CKT	CIRCUIT
CLG	CEILING
CONC	CONCRETE
CONST	CONSTRUCTION
CONT.	CONTINUOUS (S), (E)
Cu	COPPER
DB	DECIBEL(S)
DC	DIRECT CURRENT
DED	DEDICATED
DEPT	DEPARTMENT
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DISC.	DISCONNECT
DS	DAYLIGHT SENSOR
DWG	DRAWING
(E)	EXISTING
EX	EXIT
(ER)	EXISTING RELOCATED
EBB	ELECTRIC BASE BOARD
EC	ELECTRICAL CONTRACTOR
EDH	ELECTRIC DUCT HEATER
EF	EXH FAN EXHAUST FAN
ELEC	ELECTRIC
ELEV	ELEVATOR
EM	EMERGENCY
ENCL	ENCLOSURE
EQUIP	EQUIPMENT
EUH	ELECTRIC UNIT HEATER
EWC	ELECTRIC WATER COOLER
EXIST	EXISTING
EX	EXIT SIGN
EXT	EXTERIOR
FIXT	FIXTURE
FLEX	FLEXIBLE
FLR	FLOOR
FP	FIRE PROTECTION
FURN	FURNISH
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
HOA	HAND, OFF, AUTO STATION
HORIZ	HORIZONTAL
HP	HORSEPOWER
HR	HOUR
HVAC	HEATING, VENTILATING, AND AIR CONDITIONING
HZ	FREQUENCY
INT	INTERIOR
KW	KILOWATT
KWH	KILOWATT HOUR
LV	LOW VOLTAGE
MAX	MAXIMUM
MC	MECHANICAL CONTRACTOR
MCB	MAIN CIRCUIT BREAKER
MECH	MECHANICAL
MIN	MINIMUM
MISC	MISCELLANEOUS
MLO	MAIN LUG ONLY
MTD	MOUNTED
MTL	METAL
(N)	NEW
NA	NOT APPLICABLE
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO.	NUMBER
NTS	NOT TO SCALE
OS	OCCUPANCY SENSOR
PC	PHOTOCELL
PD	PRESSURE DROP/DIFFERENCE
PH	PHASE (ELECTRIC)
POC	POINT OF CONNECTION
QTY	QUANTITY
RECPT.	RECEPTALCE(S)
RM	ROOM
RTU	ROOF TOP UNIT
SECT	SECTION
SHT	SHEET
SPD	SURGE PROTECTION DEVICE
SWT	SWITCH
T.C.	TIME CLOCK
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VA	VOLT AMPERE
VAR	VARIABLE
VERT	VERTICAL
VS	VACANCY SENSOR
W	WIRE OR WATT
W/	WITH
W/O	WITHOUT
WP	WEATHERPROOF

LEGEND

NOTE: NOT ALL ITEMS MAY BE USED.

SYMBOL	DESCRIPTION
①	KEYNOTE TAG
⚠	REVISION TAG
■	PUSH BUTTON
ⓐ	JUNCTION BOX
Ⓟ	PULL BOX
—/—	NEW UNDERGROUND CONDUIT AND WIRE RUN
—/—	GROUND WIRE
○	SITE LIGHTING POLE LIGHT

GENERAL NOTES

ELECTRICAL NOTES AND SPECIFICATIONS

1. ALL WORK SHALL COMPLY WITH ALL THE APPLICABLE LOCAL, MUNICIPAL AND FIRE CODES. THE WORK SHALL BE IN TOTAL COMPLIANCE WITH THE RULES AND REGULATIONS OF THE AUTHORITIES HAVING JURISDICTION.

2. REVIEW ADOPTED CODES AND CODE AMENDMENTS WITH THE LOCAL GOVERNING AUTHORITIES AND BECOME FAMILIAR WITH THE LOCAL REGULATIONS RELATING TO THE WORK.

3. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND INSPECTION FEES AS REQUIRED FOR HIS PORTION OF THE WORK.

4. CONTRACTOR SHALL GUARANTEE ALL WORK FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL COMPLETION.

5. CONTRACTOR SHALL COORDINATE ALL WORK WITH THE RESPECTIVE TRADES AND VERIFY LOCATIONS FROM THE ARCHITECTURAL DRAWINGS, FIELD MEASUREMENTS AND SUPPLIER SHOP DRAWINGS.

6. COORDINATE EQUIPMENT VOLTAGE, PHASE, BREAKER SIZE, AND DISCONNECTING MEANS WITH SUBCONTRACTORS PROVIDING EQUIPMENT PRIOR TO ORDERING AND INSTALLATION OF ANY EQUIPMENT, PANELS, BREAKERS, CONDUIT AND WIRE, ETC.

7. WORK REQUIRED OF ANY TRADE MAY BE SHOWN ANYWHERE ON ANY DRAWING OR IN ANY PART OF THE SPECIFICATIONS. THE CONTRACTOR IS ADVISED TO INCLUDE ALL WORK IN HIS BID. NO CLAIM FOR AN EXTRA WILL BE CONSIDERED FOR FAILURE TO DO SO.

8. CONTRACTOR SHALL REVIEW ALL DRAWINGS AND SPECIFICATIONS OF ALL TRADES AND SHALL INCLUDE ANY ELECTRICAL WORK INDICATED OR REQUIRED BY ANY TRADE. THE CONTRACTOR ACKNOWLEDGES BY SUBMITTING A BID THAT CONSTRUCTION DOCUMENTS HAVE BEEN REVIEWED, AND THAT THE INFORMATION SHOWN AND DESCRIBED IS SUFFICIENT TO PREPARE A COMPLETE AND ACCURATE BID FOR A COMPLETE, FINISHED PROJECT. ANY CLARIFICATIONS, DISCREPANCIES, OMISSIONS, REQUEST FOR ADDITIONAL INFORMATION, OR UNUSUAL CONDITIONS ARE TO BE BROUGHT TO THE ARCHITECT'S ATTENTION FOR RESOLUTION IN WRITING PRIOR TO SUBMITTING BIDS.

9. SEE ARCHITECTUAL PLANS FOR FULL SCOPE OF ARCHITECTURAL DEMOLITION. REMOVE ALL ELECTRICAL DEVICES AND FIXTURES AND ASSOCIATED CONDUIT AND WIRE IN WALLS AND CEILINGS BEING DEMOLISHED. REMOVE FLOOR MOUNTED ELECTRICAL DEVICES AND ASSOCIATED CONDUIT AND WIRE IN DEMOLISHED AREAS. PATCH EXISTING FLOORS WHERE DEVICES AND CONDUITS ARE REMOVED. MAINTAIN EXISTING FLOOR FIRE RATINGS.

10. ALL DIMENSIONS TO BE VERIFIED IN THE FIELD AND WITH SHOP DRAWINGS.

11. CONTRACTOR SHALL COMPLY WITH ALL IDENTIFICATION REQUIREMENTS OF THE NEC AND AHJ

12. INDEPENDENT ELECTRICAL EQUIPMENT SUPPORT WIRES INSTALLED WITHIN A DROP CEILING SHALL BE DISTINGUISHED BY COLOR, TAG OR OTHER PERMANENT MEANS

13. LAYOUT OF EQUIPMENT, ACCESSORIES AND WIRING ARE DIAGRAMMATIC AND DO NOT INDICATE EVERY BOX, CONDUIT, WIRING OR SIMILAR ITEMS FOR A COMPLETE INSTALLATION.

14. CUTTING OF ANY STRUCTURAL MEMBER SHALL BE APPROVED BY THE ARCHITECT IN WRITING PRIOR TO WORK BEING DONE.

15. WHEREVER CIRCUIT CONDUCTORS ARE SPLICED IN A BOX, ANY EQUIPMENT GROUNDING CONDUCTOR ASSOCIATED WITH THESE CIRCUITS MUST BE BONDED ("PIGTAILED") TO THE BOX.

16. CIRCUIT NUMBERS GIVEN ON DRAWINGS ARE FOR CIRCUIT IDENTIFICATION ONLY. THE CONTRACTOR SHALL INSTALL CIRCUITRY AS GOVERNED BY FIELD CONDITIONS. PROVIDE UPDATED PANEL DIRECTORIES AT COMPLETION OF PROJECT.

17. ALL LINE VOLTAGE CONDUCTORS SHALL BE COPPER, MINIMUM #12 GAGE, 98% CONDUCTIVITY WITH 600 VOLT INSULATION, SUITABLE FOR 60°C OPERATING TEMPERATURE, APPROPRIATE FOR DRY OR WET LOCATIONS, THW, THWN OR THHN FOR BRANCH CIRCUITS, SIZES #10 AND LARGER TO BE STRANDED. FEEDERS AND MOTOR POWER CIRCUITS SHALL BE THW OR THHN, COPPER WITH 600 VOLT INSULATION, SUITABLE FOR 75°C OPERATING TEMPERATURE AND APPROPRIATE FOR DRY OR WET LOCATIONS. LOW VOLTAGE CONDUCTORS SHALL BE MINIMUM #14 GAGE.

18. RACEWAY FITTINGS SHALL BE GALVANIZED STEEL. EXTERIOR MOUNTED RACEWAYS SHALL BE GALVANIZED RIGID STEEL WITH THREADED FITTINGS, PROTECTED WITH GALVANIZED COATING.

19. WHERE CONDUIT PASSES FROM THE INTERIOR TO THE EXTERIOR OR UNCONDITIONED SPACES, THE RACEWAY SHALL BE PVC AND SHALL BE FILLED WITH AN APPROVED MATERIAL (POLYWATER FST OR EQUAL) TO PREVENT CIRCULATION OF WARM AIR TO A COLDER SECTION OF THE RACEWAY.

20. PROVIDE PULL WIRE IN ALL EMPTY CONDUITS.

21. INSTALLATION OF ALL LIGHTING FIXTURES SHALL INCLUDE ALL NECESSARY CONDUIT (SOLID OR FLEXIBLE), WIRING, JUNCTION BOXES, ETC., FOR CIRCUIT DEVICES.

22. ALL FEEDER AND BRANCH CIRCUITS SHALL INCLUDE GROUNDING CONDUCTORS SIZED IN ACCORDANCE WITH THE NEC.

23. ALL NEW MATERIALS AND EQUIPMENT SHALL BE LISTED AND/OR LABELED BY U.L., ETL, CSA OR ANOTHER RECOGNIZED TESTING LAB.

24. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS AND RECOMMENDATIONS.

25. CORING AND PENETRATIONS: FURNISH AND INSTALL ALL SLEEVES THRU WALLS AND CORING THRU FLOORS. ANY CUTTING, DRILLING OR CORING SHALL BE DONE WET TO MINIMIZE SPREAD OF DUST. WEATHERPROOF ALL PENETRATIONS THRU FOUNDATION AND EXTERIOR WALLS. FIREPROOF ALL CONDUITS OPENINGS BETWEEN FLOORS AND ANY INTERSPACE FIRE SEPARATION WALLS WITH AN APPROVED UL LISTED FIRE RETARDANT MATERIAL.

26. ALL 120 VOLT CIRCUITS SHALL HAVE A DEDICATED NEUTRAL.

27. THE TOTAL VOLTAGE DROP ACROSS THE COMBINATION OF FEEDERS AND BRANCH CIRCUITS SHALL NOT EXCEED FIVE (5) PERCENT.

28. LIGHTING SYSTEM FUNCTIONAL TESTING:

A. FUNCTIONAL TESTING SHALL BE PERFORMED IN COMPLIANCE WITH THE IECC BY THE GENERAL CONTRACTOR TO ENSURE THAT THE HARDWARE IS CALIBRATED, ADJUSTED, PROGRAMMED AND IN PROPER WORKING CONDITION IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND MANUFACTURER'S INSTALLATION INSTRUCTIONS.

B. TESTING SHALL CONFIRM THAT THE PLACEMENT, SENSITIVITY AND TIME-OUT ADJUSTMENTS FOR OCCUPANT SENSORS YIELD ACCEPTABLE PERFORMANCE.

C. CONFIRM THAT THE TIME SWITCHES AND PROGRAMMABLE SCHEDULE CONTROLS ARE PROGRAMMED TO TURN THE LIGHTS OFF.

29. SUBSTITUTIONS: CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DESIGN MODIFICATIONS RESULTING FROM EQUIPMENT SUBSTITUTED FROM THAT WHICH IS SPECIFIED. MODIFICATIONS INCLUDE BUT NOT LIMITED TO: REQUIRED WORKING AND CODE CLEARANCES, LOCATIONS AND DIMENSIONS OF OPENINGS, STRUCTURAL COORDINATION, BREAKER, WIRE, CONDUIT SIZES. SUBSTITUTIONS OF LIGHT FIXTURES SHALL BE VERIFIED COMPLIANT WITH THE ENERGY CODE BY THE CONTRACTOR. CONTRACTOR SHALL PROVIDE REVISED COMCHK TO AHJ IF NECESSARY. SUBSTITUTIONS OF LIGHT FIXTURES SHALL BE VERIFIED BY CONTRACTOR TO HAVE SAME PHOTOMETRIC DISTRIBUTION AS LIGHT FIXTURES SPECIFIED.

30. SHOP DRAWINGS:

A. SUBMIT COORDINATED SHOP DRAWINGS FOR ALL EQUIPMENT, CONDUIT, WIRE AND TIME CLOCK, ETC.

B. SUBMIT ALL SHOP DRAWINGS FOR REVIEW AND APPROVAL TO ARCHITECT'S OFFICE PRIOR TO PURCHASE, FABRICATION, AND INSTALLATION.

C. CONTRACTOR SHALL HIGHLIGHT OR SUMMARIZE ANY DEVIATIONS IN THE SHOP DRAWING SUBMITTALS FROM THE CONTRACT DOCUMENTS.

31. MANUALS: DOCUMENTS DESCRIBED BELOW SHALL BE PROVIDED TO THE BUILDING OWNER WITHIN 90 DAYS OF THE DATE (U.N.O.) OF RECEIPT OF THE CERTIFICATE OF OCCUPANCY.

A. SUBMITTAL DATA STATING EQUIPMENT SIZE AND SELECTED OPTIONS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE

B. MANUFACTURER'S OPERATION MANUALS AND MAINTENANCE MANUALS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE, EXCEPT EQUIPMENT NOT FURNISHED AS PART OF THE PROJECT. REQUIRED ROUTINE MAINTENANCE ACTIONS SHALL BE CLEARLY IDENTIFIED.

C. NAME AND ADDRESS OF AT LEAST ONE SERVICE AGENCY

D. A NARRATIVE OF HOW EACH SYSTEM IS INTENDED TO OPERATE, INCLUDING RECOMMENDED SET-POINTS

E. AS-BUILT DRAWING(S) OF ELECTRICAL POWER SYSTEMS WITHIN 30 DAYS OF SYSTEM ACCEPTANCE

635 BUTTERFIELD ROAD, SUITE #310
OAKBROOK TERRACE, IL 60181
PHONE (630) 627-6078
WWW.MGN.ENGINEERING
IL DESIGN FIRM: #184001114
CONSULTING ENGINEERS. SINCE 1967.

DOWNTOWN ORLAND PARK
PARCEL H
ORLAND PARK, ILLINOIS

REV.	DESCRIPTION	DATE
	ISSUE FOR REVIEW AND COORDINATION	06.25.2025

PROJECT NO.: 25-184

DRAWN BY: EJ

REVIEWED BY: PN

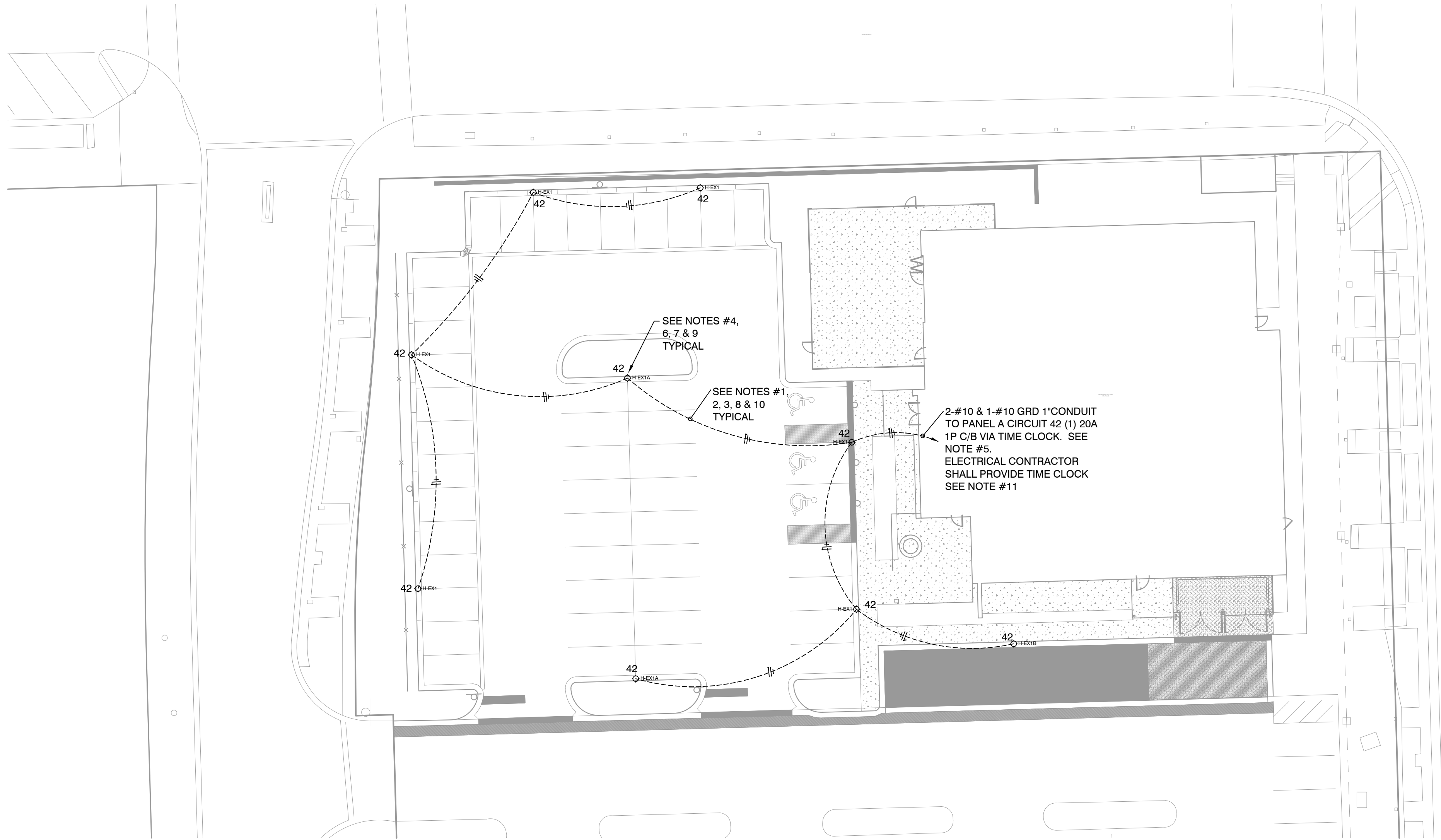
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ELECTRICAL
NOTES, LEGEND &
ABBREVIATIONS

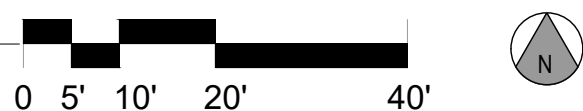
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CAUTION: IF THIS SHEET IS NOT 24x36, IT IS A REDUCED PRINT AND THE NOTED SCALES DO NOT APPLY.

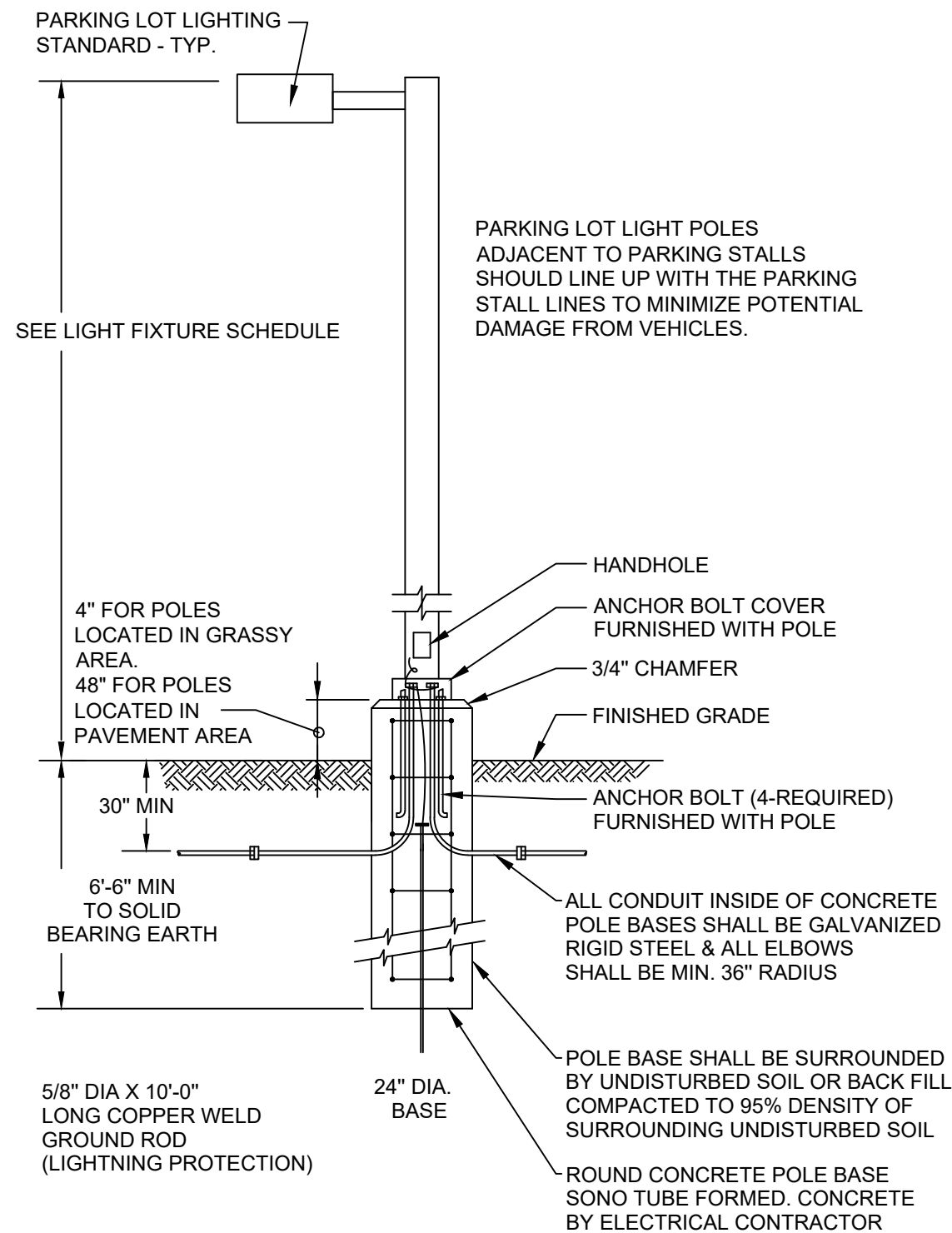


1 ELECTRICAL SITE LIGHTING PLAN
1/8" = 1'-0"



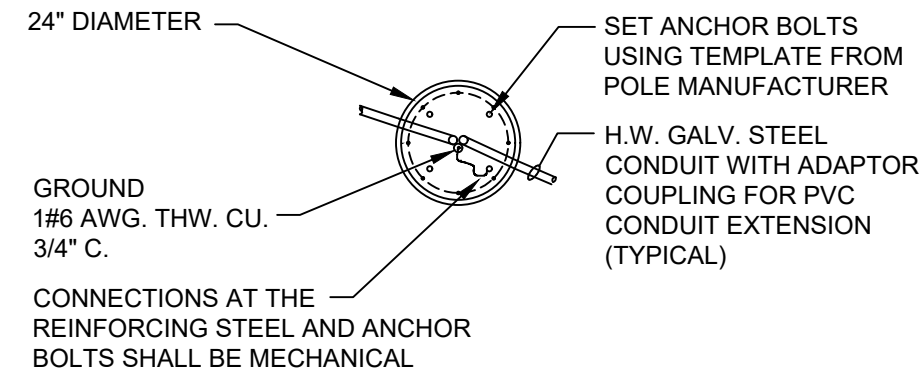
ELECTRICAL SITE PLAN NOTES:

- ALL UNDERGROUND SITE WORK CONDUIT TO BE MINIMUM 36" BELOW FINISHED GRADE AND GALVANIZED RIGID STEEL. MINIMUM CONDUIT 1" TRADE SIZE. MINIMUM WIRE SIZE FOR ALL SITE WORK WIRING SHALL BE #10 AWG.
- ALL CUTTING, TRENCHING, CORING, BACKFILLING AND COMPACTING FOR THE ELECTRICAL INSTALLATION IS BY THE ELECTRICAL CONTRACTOR. ALL EXCESS DEBRIS FROM CUTTING, TRENCHING AND CORING SHALL BE COMPLETELY REMOVED FROM THE SITE BY THE ELECTRICAL CONTRACTOR. IF EXISTING SPOILS ARE UNSUITABLE, E.C. TO GAIN PERMISSION (IN WRITING) FROM THE ARCHITECT TO REUSE EXISTING SPOILS.
- ELECTRICAL CONTRACTOR SHALL BACKFILL ALL TRENCHES IN LAYERS OF 8" TO 95% DENSITY OF SURROUNDING UNDISTURBED SOIL FOR ALL TRENCHES. ELECTRICAL CONDUITS SHALL BE SURROUNDED WITH A MINIMUM OF 8" OF SAND.
- ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL CONDUIT STUBS, GROUND CONNECTIONS, ANCHOR BOLTS AND GROUND RODS. REFER TO "CONCRETE BASE DETAILS" FOR ADDITIONAL REQUIREMENTS. CONCRETE BY ELECTRICAL CONTRACTOR.
- ALL OPENINGS AND PENETRATIONS THROUGH FOUNDATION AND EXTERIOR WALLS CREATED BY FIXTURES AND CONDUITS SHALL BE FILLED WITH WATERPROOF MATERIAL TO PREVENT ANY MOISTURE FROM ENTERING THROUGH THE OPENING.
- EACH POLE SHALL HAVE BUSSMANN IN-LINE FUSES (FUSED PER MANUFACTURER'S SPECIFICATIONS) FOR EACH CIRCUIT CONDUCTOR.
- EACH POLE SHALL BE FURNISHED WITH MINIMUM OF 4" x 6" HAND HOLE AND A GROUNDING LUG CONNECTED TO POLE FOR GROUNDING CONDUCTOR. ALL POLES SHALL BE FURNISHED WITH BOLT COVERS.
- ALL CUTTING OF EXISTING ASPHALT AND CONCRETE SURFACES SHALL BE DOUBLE ROW SAW CUT AND STRAIGHT FROM POINT TO POINT. ALL PATCHING OF EXISTING ASPHALT AND CONCRETE SURFACES SHALL BE PERFORMED BY ELECTRICAL CONTRACTOR.
- E.C. SHALL VERIFY STUB-UP AREA FOR ALL FIXTURES TO INSURE RACEWAY WILL FIT INSIDE CONCRETE BASES. REWORK AS REQUIRED (TYPICAL ALL BASES).
- ALL CONDUIT FEEDERS AND BRANCH CIRCUITS UNDER ROADWAYS, DRIVEWAYS, SIDEWALKS AND PARKING SHALL BE 36" BELOW GRADE IN A 3" CONCRETE ENCASED, FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.
- TIME-CLOCK CONTROLS FOR EXTERIOR LIGHTING HAVE A CLOCK CAPABLE OF BEING PROGRAMMED FOR NOT FEWER THAN 7 DAYS, CAPABLE OF BEING SET FOR SEVEN DIFFERENT DAY TYPE PER WEEK, SHALL INCORPORATE AN AUTOMATIC HOLIDAY SETBACK FEATURE. SHALL HAVE PROGRAM BACKUP CAPABILITIES THAT PREVENT THE LOSS OF PROGRAM AND TIME SETTING FOR A PERIOD OF NOT LESS THAN 10 HOURS IN THE EVENT THAT THE POWER IS INTERRUPTED. THE PARKING LOT LIGHTS SHALL BE CONTROLLED SO THAT THE TOTAL WATTAGE OF THE LIGHTS IS AUTOMATICALLY REDUCE BY NOT LESS THAT 50 PERCENT NOT LATER THAN ONE HOURS AFTER BUSINESS CLOSING TO NOT EARLIER THAN ONE HOUR BEFORE BUSINESS OPENING.

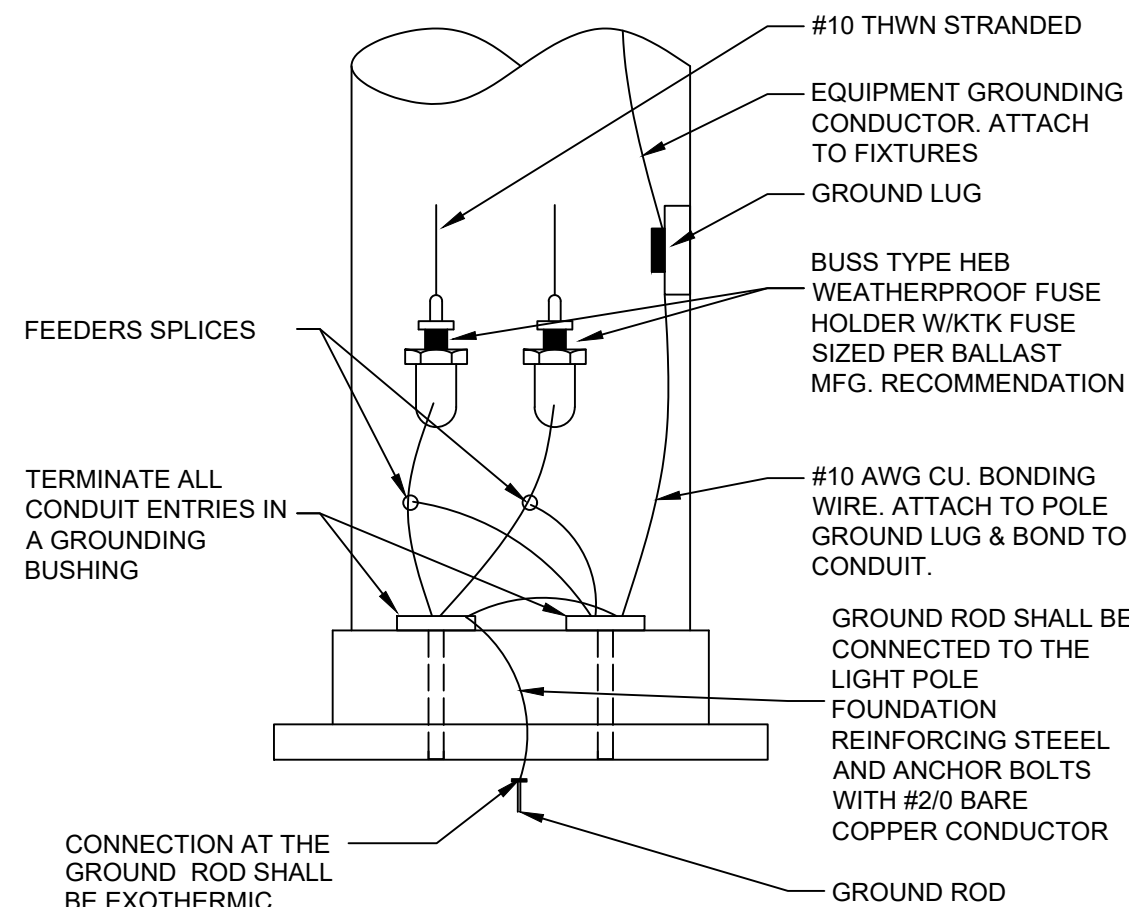


2 PARKING LOT LIGHT BASE DETAIL
NO SCALE

NOTE INSTALLING CONTRACTOR SHALL BE RESPONSIBLE FOR THE FOLLOWING:
THE POLE BASE TO BE INSTALLED SHALL BE DESIGNED AND APPROVED BY A LICENSED STRUCTURAL ENGINEER IN THE STATE OF ILLINOIS. (EFFECTIVE PROJECTED AREA, EPA WIND LOADING REQUIREMENTS TO BE DETERMINED, FOR FINAL BASE SIZE) DIMENSION INDICATED TO BE VERIFIED BY STRUCTURAL ENGINEER.



3 TOP VIEW OF PARKING LOT LIGHT BASE
WITH COVER PLATE REMOVED
NO SCALE



4 PARKING LOT LIGHT WIRING DETAIL
NO SCALE



MGN, INC.
635 BUTTERFIELD ROAD, SUITE #310
OAKBROOK TERRACE, IL 60181
PHONE (630) 627-6078
WWW.MGNENGINEERING.COM
IL DESIGN FIRM: #184001114
CONSULTING ENGINEERS. SINCE 1967.

DOWNTOWN ORLAND PARK
PARCEL H
ORLAND PARK, ILLINOIS

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