



SITE PLAN AND CONSTRUCTION DOCUMENT PACKAGE

WAUKEE EXPANSION

1005 E HICKMAN ROAD

PLANS ISSUED

REV	DATE	DESCRIPTION	REV	DATE	DESCRIPTION
1	02/01/2022	CITY SUBMITTAL #2			
2	03/09/2022	CITY SUBMITTAL #3			

DEVELOPER/APPLICANT

HY-VEE, INC.
5820 WESTOWN PARKWAY
WEST DES MOINES, IOWA
515-267-2800
ATTN: JEFF STEIN

CIVIL ENGINEER/LANDSCAPE ARCHITECT

LT LEON ASSOCIATES, INC.
500 EAST LOCUST STREET, SUITE 400
DES MOINES, IOWA 50309
515-422-7016
ATTN: LUIS LEON

OWNER

HY-VEE, INC.
5820 WESTOWN PARKWAY
WEST DES MOINES, IOWA
515-267-2800

UTILITY CONTACTS

STATE ONE CALL
800-292-8989

GAS, WATER, SEWER, FIBER, CITY
OF WAUKEE
515-978-7920

ELECTRIC/STREET LIGHTS
MIDAMERICAN ENERGY
888-427-5632

TELEPHONE
CENTURYLINK
800-244-1111

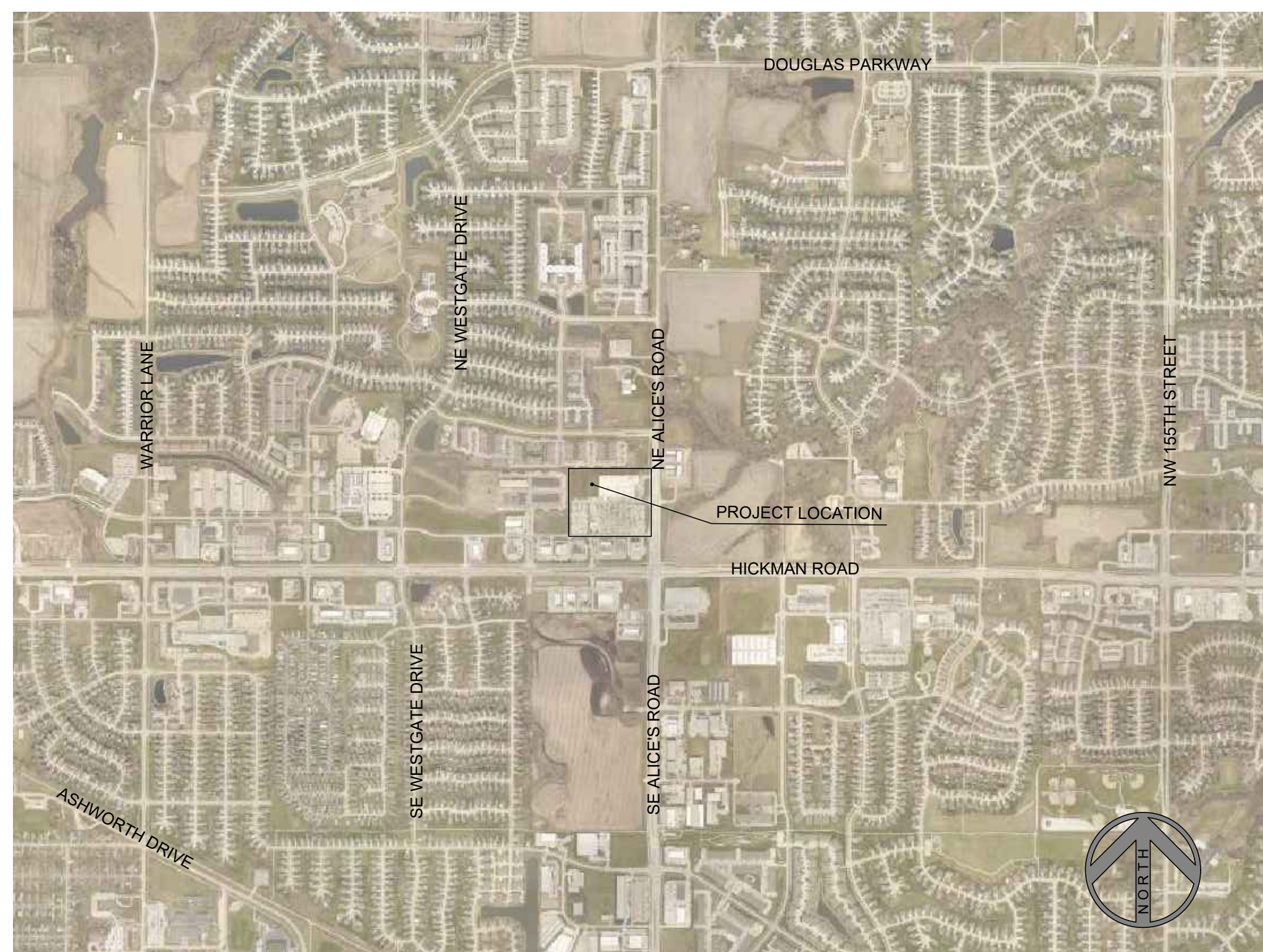
CABLE
CENTURYLINK
800-244-1111

SHEET INDEX

- C0.0 COVER SHEET
- C1.0 EXISTING CONDITIONS/
DEMOLITION PLAN
- C2.0 OVERALL SITE PLAN
- C2.1 SITE PLAN
- C2.2 DIMENSION PLAN
- C2.3 SEMI-TRAILER VEHICLE
CIRCULATION PLAN
- C2.4 PASSENGER VEHICLE
CIRCULATION PLAN
- C3.0 GRADING PLAN
- C3.1 EROSION AND SEDIMENT
CONTROL PLAN
- C4.0 UTILITY PLAN
- C4.1 PHOTOMETRIC PLAN
- C5.0 PLANTING PLAN
- C5.1 PLANTING DETAILS
- C5.2 PLANTING DETAILS
- C6.0 CONSTRUCTION DETAILS
- C6.1 CONSTRUCTION DETAILS
- C6.2 CONSTRUCTION DETAILS
- C6.3 CONSTRUCTION DETAILS
- C6.4 CONSTRUCTION DETAILS

SITE LOCATION MAP

NOT TO SCALE



	<p>I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.</p>
	<p>Signature _____ Date _____ Luis T. Leon, P.E. Iowa License Number 18685 My license renewal date is December 31, 2023.</p>
<p>Pages or sheets covered by this seal: ALL SHEETS EXCEPT C2.3, C2.4, C4.1, C5.0, C5.1, AND C5.2</p>	

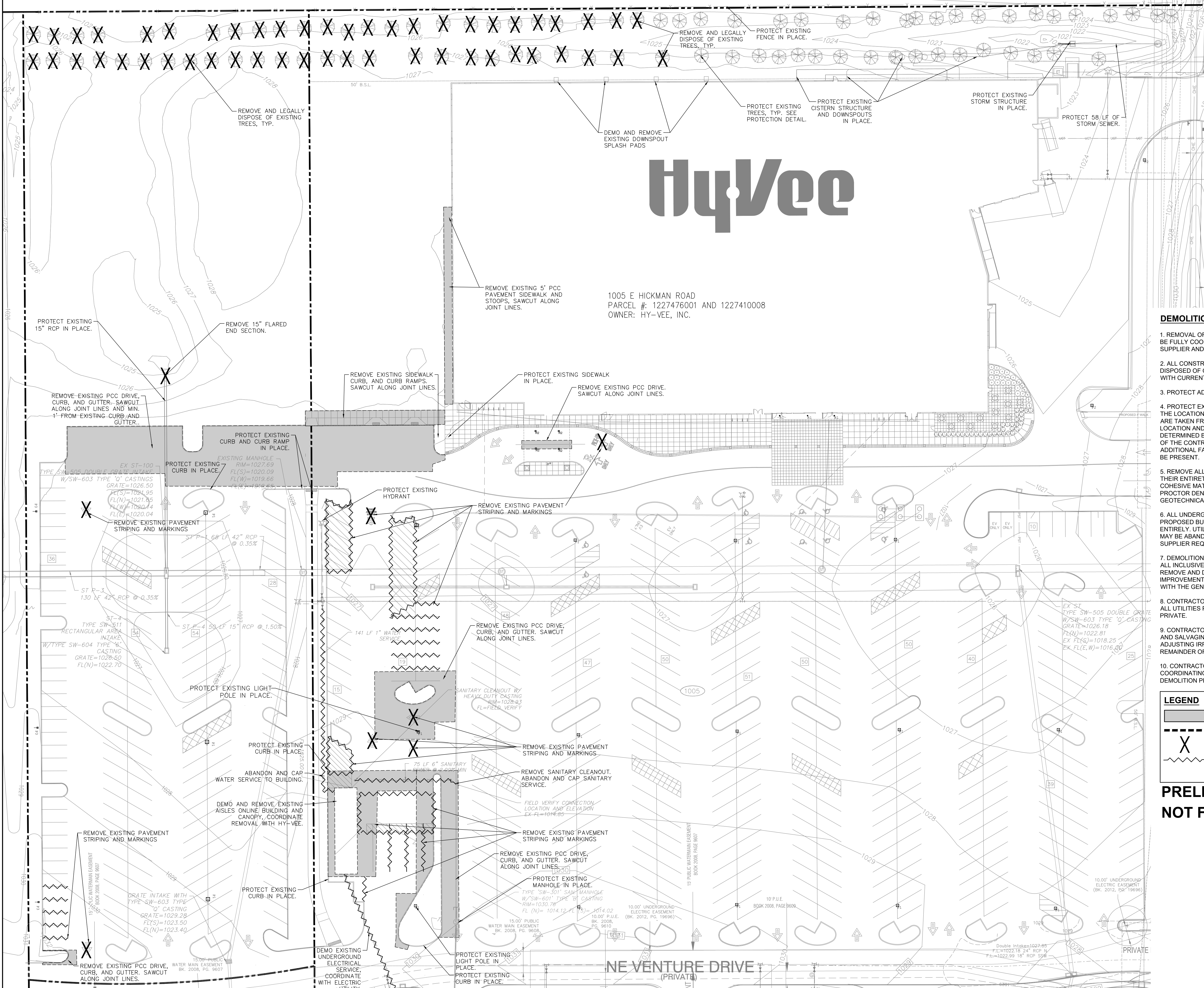
	<p>I HEREBY CERTIFY THAT THIS TECHNICAL DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND RESPONSIBLE CHARGE AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF IOWA.</p>
	<p>RACHEL A. HARRIS, PLA #LA00775 SIGNATURE _____ DATE _____ DISCIPLINE: LANDSCAPE ARCHITECT REGISTRATION EXPIRES: JUNE 22, 2022</p>
<p>PAGES OR SHEETS COVERED BY THIS SEAL: C5.0, C5.1 AND C5.2</p>	



NOT FOR CONSTRUCTION

WAUKEE EXPANSION:
CITY SUBMITTAL #3: 03/09/2022

C0.0



Hy-Vee

1005 E HICKMAN ROAD
PARCEL #: 1227476001 AND 1227410008
OWNER: HY-VEE, INC.

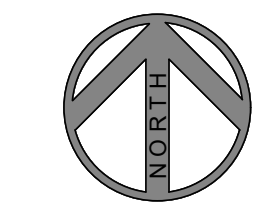
DEMOLITION NOTES

1. REMOVAL OR ABANDONMENT OF PUBLIC UTILITIES SHALL BE FULLY COORDINATED WITH APPROPRIATE UTILITY SUPPLIER AND REGULATORY AGENCIES.
2. ALL CONSTRUCTION/DEMOLITION DEBRIS SHALL BE DISPOSED OF OR RECYCLED OFF SITE IN FULL COMPLIANCE WITH CURRENT ENVIRONMENTAL REGULATIONS.
3. PROTECT ADJACENT PROPERTY DURING DEMOLITION.
4. PROTECT EXISTING UTILITIES WHICH ARE TO REMAIN. THE LOCATIONS OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN MAY BE PRESENT.
5. REMOVE ALL DESIGNATED STREETS, DRIVEWAYS, ETC. IN THEIR ENTIRETY. BACKFILL ALL EXCAVATIONS WITH COHESIVE MATERIAL COMPACTED TO 98% STANDARD PROCTOR DENSITY. BACKFILLING TO BE OBSERVED BY GEOTECHNICAL ENGINEER EMPLOYED BY OWNER.
6. ALL UNDERGROUND AND OVERHEAD UTILITIES WITHIN PROPOSED BUILDING AREA LIMITS ARE TO BE REMOVED ENTIRELY. UTILITIES OUTSIDE THE BUILDING AREA LIMITS MAY BE ABANDONED IN ACCORDANCE WITH UTILITY SUPPLIER REQUIREMENTS.
7. DEMOLITION NOTES AS SHOWN ON THE PLAN ARE NOT ALL INCLUSIVE. CONTRACTOR TO ABANDON IN PLACE OR REMOVE AND DISPOSE OF ALL EXISTING SITE IMPROVEMENTS ABOVE AND BELOW GROUND TO COMPLY WITH THE GENERAL INTENT OF THIS DOCUMENT.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES PRIOR TO CONSTRUCTION, BOTH PUBLIC AND PRIVATE.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND SALVAGING ANY IRRIGATION COMPONENTS AND ADJUSTING IRRIGATION AS REQUIRED FOR OPERATION ON REMAINDER OF SITE DURING CONSTRUCTION.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING SITE DEMOLITION WITH BUILDING DEMOLITION PRIOR TO CONSTRUCTION.

LEGEND

- REMOVE PAVING AND VEGETATION
- DEMOLITION LIMITS
- REMOVE ITEM
- REMOVE ITEM

PRELIMINARY
NOT FOR CONSTRUCTION



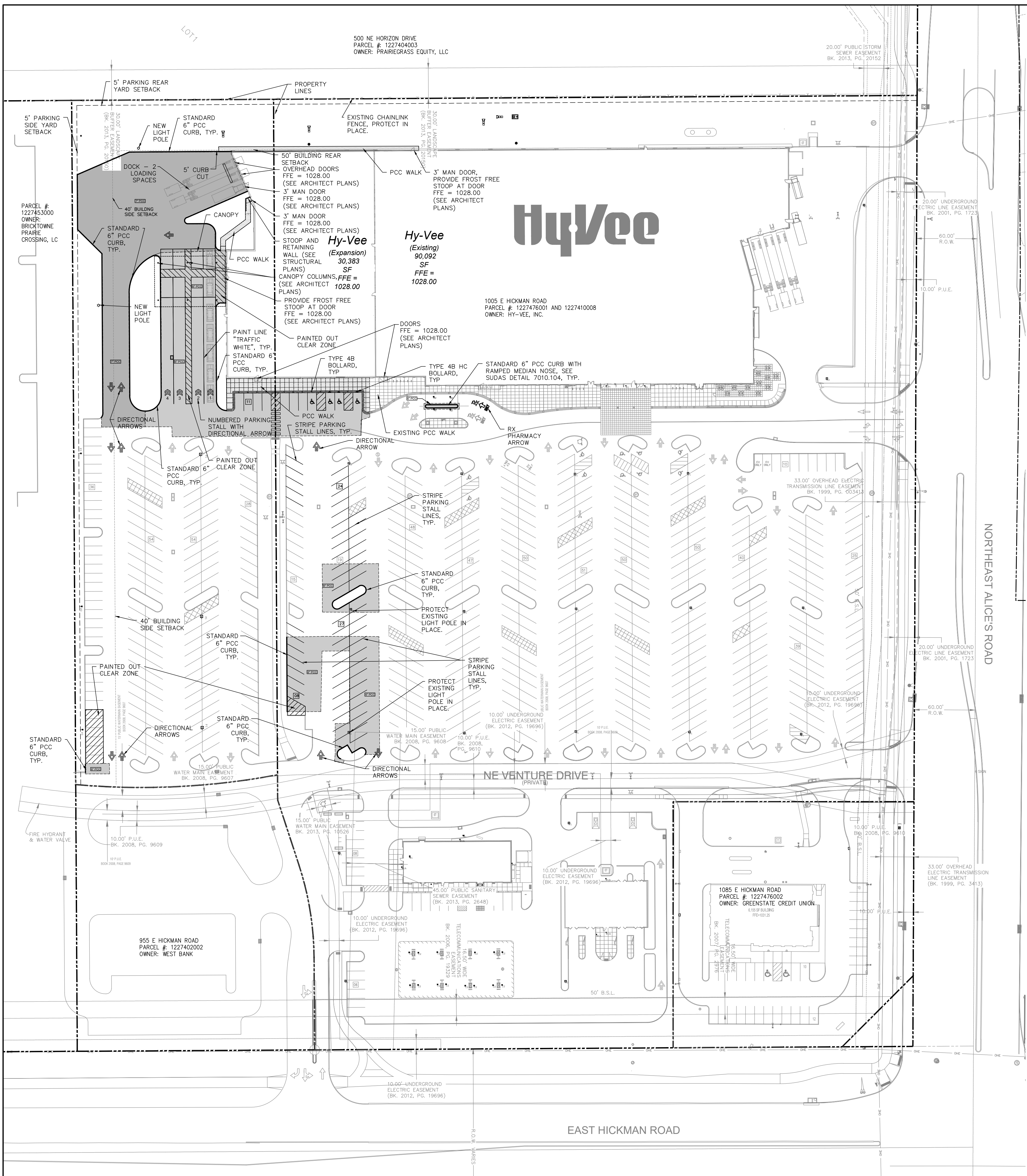
LOCATION
WAUKEE EXPANSION
1005 E. HICKMAN ROAD

REVISIONS	DATE

EXISTING
CONDITIONS/
DEMO PLAN

DRAWN BY RAH	DATE 03/09/2022
SCALE 1"=30'	JOB 007.081
SHEET	

C1.0



OWNER

HY-VEE, INC.
5820 WESTOWN PARKWAY
WEST DES MOINES, IOWA 50266

CIVIL ENGINEER

LT LEON ASSOCIATES, INC.
500 EAST LOCUST STREET, SUITE 400
DES MOINES, IOWA 50309
(515) 422-7016

CONTACT: LUIS LEON, P.E.

APPLICANT

HY-VEE, INC.
5820 WESTOWN PARKWAY
WEST DES MOINES, IOWA 50266
(515) 267-2819

CONTACT: JEFF STEIN, P.E.

LEGAL DESCRIPTION

LOT 1, THE CROSSING AT ALICE'S ROAD PLAT 5, AN OFFICIAL PLAT, CITY OF WAUKEE, DALLAS COUNTY, IOWA.

ZONING AND LAND USE

ZONING: C-1B (LARGE SCALE COMMERCIAL DISTRICT)

EXISTING USE: GROCERY STORE
PROPOSED USE: GROCERY STORE & AISLES ONLINE DRIVE THRU

PARKING AND BUILDING SETBACKS

PARKING FRONT: 10' FROM STREET RIGHT OF WAY
REAR: 5' FROM PROPERTY LINE
SIDE: 5' FROM PROPERTY LINE

BUILDING

FRONT: 50'
SIDE: 20', 40' WHEN ADJACENT TO RESIDENTIAL ZONE
REAR: 50'
BUILDING HEIGHT: MAX 3 STORIES

PROPOSED BUILDING HEIGHT

BUILDING HEIGHT: 30'
CANOPY CLEARANCE: 14'

FLOOD ZONE DESIGNATION

PROPERTY IS LOCATED IN ZONE 'X' ON THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP NO. 19049C0355E WITH A REVISED DATE OF DECEMBER 07, 2018.

SIGNAGE AND STRIPING SPECIFICATIONS:

- PAINT TRAFFIC DIRECTION ARROWS, PARKING STRIPES, AND HANDICAP SYMBOLS "TRAFFIC YELLOW" UNLESS OTHERWISE NOTED ON PLANS AND DETAILS.
- PAINT SHALL BE LEAD FREE WATERBORNE TRAFFIC AND HIGHWAY MARKING PAINT UC-3586 YELLOW AS MANUFACTURED BY DIAMOND VOGEL PAINTS OR EQUIVALENT.
- PROVIDE FOUNDRY GRADE SILICA SAND THAT MEETS A 50/60 GRADED SAND WHEN TESTED ACCORDING TO ASTM C-136 OR GLASS BEADS THAT MEET FEDERAL SPECIFICATION TT-B-1325, TYPE I, GRADATION A.
- BEFORE APPLICATION OF PAINT, PAINTING SURFACE MUST BE DRY AND FREE FROM DIRT, GREASE, OIL, OR OTHER MATERIAL THAT WOULD REDUCE THE BOND BETWEEN THE PAVEMENT AND PAINT. CLEAN THE AREA TO BE PAINTED BY SWEEPING OR COMPRESSED AIR.
- APPLY PAINT AT LOCATIONS, DIMENSIONS, AND SPACING SHOWN ON THE PLANS.
- MIX PAINT IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND APPLY AT THE RATE OF 115 SF/GALLON. THE ADDITION OF THINNER WILL NOT BE PERMITTED.
- APPLY SILICA SAND AT 4LBS/GALLON OF PAINT IMMEDIATELY AFTER THE APPLICATION OF PAINT. SILICA SAND SHALL ADHERE TO THE CURED PAINT PRIOR TO FINAL ACCEPTANCE AND PAYMENT.
- TREAT GLASS BEADS WITH ADHESION PROMOTING COATINGS AS SPECIFIED BY THE PAINT MANUFACTURER. APPLY GLASS BEADS AT 7LBS/GALLON OF PAINT IMMEDIATELY AFTER THE APPLICATION OF PAINT. GLASS BEADS SHALL ADHERE TO THE CURED PAINT PRIOR TO FINAL ACCEPTANCE OF PAYMENT.
- PROTECT ALL MARKINGS FROM DAMAGE UNTIL PAINT IS DRY.

LEGEND

- PROPERTY LINE
- EASEMENT/SETBACK LINE
- CONSTRUCTION LIMITS
- TRAFFIC SIGNAGE
- BOLLARD
- LIGHT FIXTURE
- 7" PCC
- 6" PCC
- 4" PCC/SIDEWALK
- TYP TYPICAL

GENERAL NOTES

- PROTECT EXISTING STRUCTURES AND ADJACENT PROPERTY DURING CONSTRUCTION.
- PROTECT EXISTING UTILITIES DURING CONSTRUCTION.
- THE LOCATIONS OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL UTILITIES OTHER THAN THOSE SHOWN ON THE PLAN MAY BE PRESENT.
- ALL DIMENSIONS TO BACK-OF-CURB UNLESS NOTED OTHERWISE. ALL DIMENSIONS TO BE FIELD VERIFIED.
- ALL SLOPES IN PAVEMENT SHALL BE UNIFORM TO AVOID PONDING.
- FINISH GRADES SHOWN ARE TO TOP OF PAVING, SIDEWALKS, OR FINISH GRADE.
- STAGING LOCATION FOR CONSTRUCTION EQUIPMENT AND MATERIALS TO BE COORDINATED WITH AND APPROVED BY THE OWNER.

PAVEMENT SPECIFICATIONS

CONCRETE:

- CONCRETE MIX BY UNIT VOLUME:
 - TYPE IP BLENDED CEMENT: 10.6%
 - POTABLE WATER: 13.3%
 - AIR ENTRAINMENT: 06.0%
 - FINE AGGREGATE ($\le 3/8''$): 31.5%
 - COURSE AGGREGATE ($3/8'' - 1.0''$): 38.6%
 A. MAXIMUM SUBSTITUTION OF FLY ASH SHALL BE 15%. FLY ASH SHALL CONFORM TO ASTM C618 CLASS C.
 B. MAXIMUM SLUMP USING SLIP-FORM PLACEMENT IS 1 1/2". MAXIMUM SLUMP USING OTHER PLACEMENT METHODS IS 4".
 C. AGGREGATE SHALL BE CLEAN SAND AND CLEAN CRUSHED STONE OR CLEAN GRAVEL FOR HIGH DURABILITY.

- INSTALL ROADS, PARKING SURFACES, SIDEWALKS AND CURBS WHERE INDICATED ON PLAN. CONCRETE STRENGTH SHALL BE 4,000 PSI @ 28 DAYS.
- FOR CONCRETE PAVEMENTS, PROVIDE CONTROL JOINTS AT 12'-0" OVER CENTER EACH WAY MAXIMUM UNLESS NOTED OTHERWISE ON PLAN.
- PERFORM CONCRETE WORK IN ACCORDANCE WITH ACI 301 AND ACI 318. CONFORM TO ACI305 DURING HOT WEATHER AND ACI 306.1 DURING COLD WEATHER.
- CONCRETE FINISH: MEDIUM BROOM PERPENDICULAR TO THE PATH OF TRAVEL.
- CONCRETE CURING AGENT: RESIN BASED, MEMBRANE FORMING COMPOUND COMPLYING WITH ASTM C309, TYPE 1.
- CONCRETE SIDEWALK JOINT SEALANT: SELF-LEVELING POLYURETHANE GUN GRADE SEALANT, COLOR: GRAY.
- CONCRETE ROADS, PARKING LOT, AND CURB JOINT SEALANT: HOT POURED JOINT SEALANT COMPOSED OF PETROPOLYMERS MEETING REQUIREMENTS OF ASTM D 3405. FILL JOINTS FULL. DO NOT USE BACKER ROD.

ASPHALT:

- TACK COAT:
 - A. PG 66-22
- APPLY TACK COAT AT .08 GSY RESIDUAL RATE ON CLEAN, DRY SURFACE FREE OF LOOSE PARTICLES PRIOR TO PLACING HMA MIX.
- HOT MIX ASPHALT. REFER TO IOWA SUDAS SPECIFICATIONS:
 - A. SUBMIT MIX DESIGN FOR APPROVAL
 - B. HMA STANDARDS TRAFFIC (ST) SURFACE: 1/2", PG 58-28H
 - C. MAXIMUM RAP: 20%
- PLACE THE HMA MIXTURE IN THE NUMBER OF LIFTS REQUIRED TO PRODUCE THE REQUIRED THICKNESS. THE COMPACTED THICKNESS OF THE TOP LIFT SHALL NOT EXCEED 2 INCHES.
- PLACE SUCCEEDING LIFTS OF HMA AS SOON AS THE PREVIOUS LIFT HAS BEEN COMPACTED.
- COMPACT EACH LIFT TO 92-96% DENSITY. VERIFY DENSITY BY PROVIDING CORES PER OWNERS TESTING AGENCY.

PARKING REQUIREMENTS

	REQUIRED	EXISTING	PROPOSED
C-STORE: (5/1000 * 4,541)	23	25	25
C-STORE CANOPY	0	16	16
CAR WASH (1 PER BAY)	4	4	4
GROCERY (4/1000 * 90,092)	360	639	639
FUTURE GROCERY STORE EXPANSION (4/1000 * 30,383)	122	0	37
TOTAL	509	684	721
CAR WASH QUEUING (2 CARS PER BAY)	8	12	12

PERVIOUS/IMPERVIOUS CALCULATIONS

TOTAL SITE AREA=653,371 SF (15.00 ACRES)		
BUILDING GROSS FLOOR AREA:		
C-STORE:	4,541 SF	20% OF GROSS LAND AREA (15.00 AC)
GROCERY:	90,092 SF	TOTAL REQUIRED OPEN SPACE: 3.00 AC
GROCERY EXPANSION:	30,383 SF	TOTAL PROVIDED OPEN SPACE: 3.04 AC
TOTAL GROCERY W/ EXPANSION:	120,475 SF	
CAR WASH:	3,800 SF	
TOTAL BUILDING AREA:	128,816 SF	
TOTAL PAVED AREA:	391,957 SF	
TOTAL OPEN SPACE AREA:	132,598 SF	
TOTAL PERVIOUS AREA=132,598 SF (20.29%)		
TOTAL IMPERVIOUS AREA=520,773 SF (79.71%)		

**PRELIMINARY
NOT FOR
CONSTRUCTION**



HY-VEE, INC.
5820 WESTOWN PARKWAY
WEST DES MOINES, IOWA 50266
P 515-267-2800
F 515-267-2935

LOCATION
WAUKEE EXPANSION
 1005 E. HICKMAN ROAD

REVISIONS	DATE

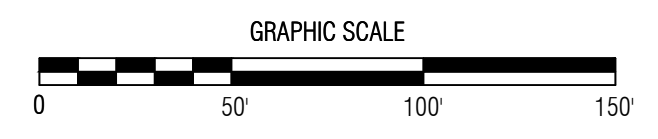
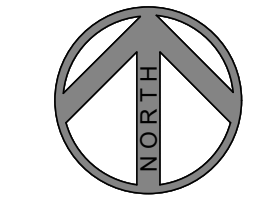
DRAWN BY

**OVERALL
SITE
PLAN**

DRAWN BY RAH	DATE 03/09/2022
SCALE 1"=50'	JOB 007.081

SHEET

C2.0



REVISIONS	DATE	DRAWN BY

DRAWN BY RAH	DATE 03/09/2022
SCALE 1"=30'	JOB 007.081
SHEET	

LEGEND

- PROPERTY LINE
- EASEMENT/SETBACK LINE
- CONSTRUCTION LIMITS
- TRAFFIC SIGNAGE
- BOLLARD
- LIGHT FIXTURE
- 7" PCC
- 6" PCC
- 4" PCC/SIDEWALK
- TYP TYPICAL

- GENERAL NOTES**
- PROTECT EXISTING STRUCTURES AND ADJACENT PROPERTY DURING CONSTRUCTION.
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 - A. MAXIMUM SUBSTITUTION OF FLY ASH SHALL BE 15%. FLY ASH SHALL CONFORM TO ASTM C618 CLASS C.
 - B. MAXIMUM SLUMP USING SLIP-FORM PLACEMENT IS 4". MAXIMUM SLUMP USING OTHER PLACEMENT METHODS IS 4".
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 - CONCRETE CURING AGENT: RESIN BASED, MEMBRANE FORMING COMPOUND COMPLYING WITH ASTM C309, TYPE 1.
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- ASPHALT:**
- TACK COAT:
 - A. PG 66-22
 - APPLY TACK COAT AT .08 GSY RESIDUAL RATE ON CLEAN, DRY SURFACE FREE OF LOOSE PARTICLES PRIOR TO PLACING HMA MIX.
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	REQUIRED	EXISTING	PROPOSED
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TOTAL	509	684	721
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PERVIOUS/IMPERVIOUS CALCULATIONS

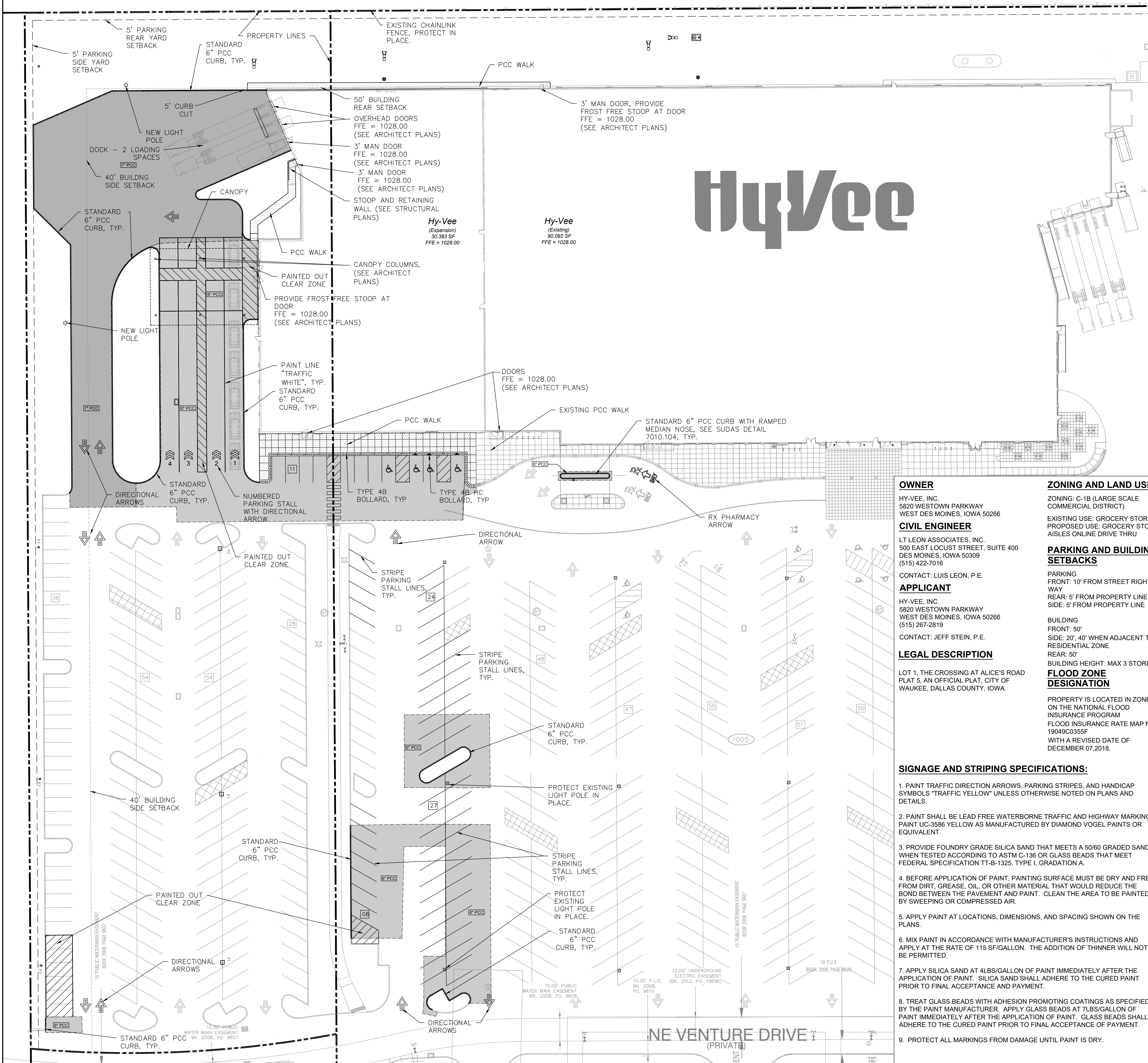
	REQUIRED	EXISTING	PROPOSED
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TOTAL OPEN SPACE AREA:	132,598 SF		
TOTAL PERVIOUS AREA=132,598 SF (20.29%)			
TOTAL IMPERVIOUS AREA=520,773 SF (79.71%)			

OPEN SPACE REQUIREMENTS

20% OF GROSS LAND AREA (15.00 AC)
TOTAL REQUIRED OPEN SPACE: 3.00 AC
TOTAL PROVIDED OPEN SPACE: 3.04 AC

PRELIMINARY NOT FOR CONSTRUCTION

GRAPHIC SCALE
0 30' 60' 90'



OWNER
HY-VEE, INC.
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WEST DES MOINES, IOWA 50266

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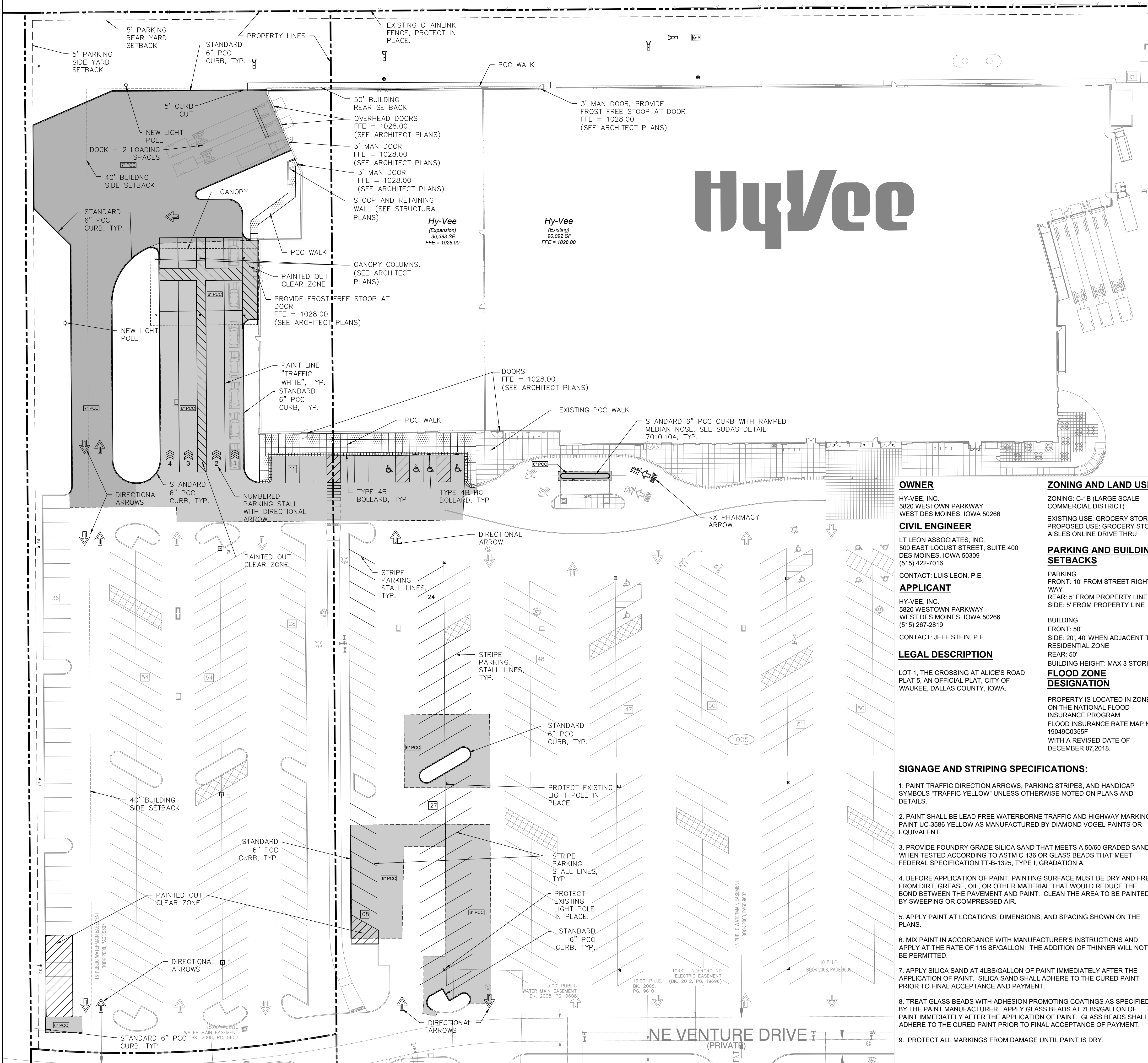
LEGAL DESCRIPTION
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PLAT 5, AN OFFICIAL PLAT, CITY OF WAUKEE, DALLAS COUNTY, IOWA.

ZONING AND LAND USE
ZONING: C-1B (LARGE SCALE COMMERCIAL DISTRICT)
EXISTING USE: GROCERY STORE
PROPOSED USE: GROCERY STORE & AISLES ONLINE DRIVE THRU

PARKING AND BUILDING SETBACKS
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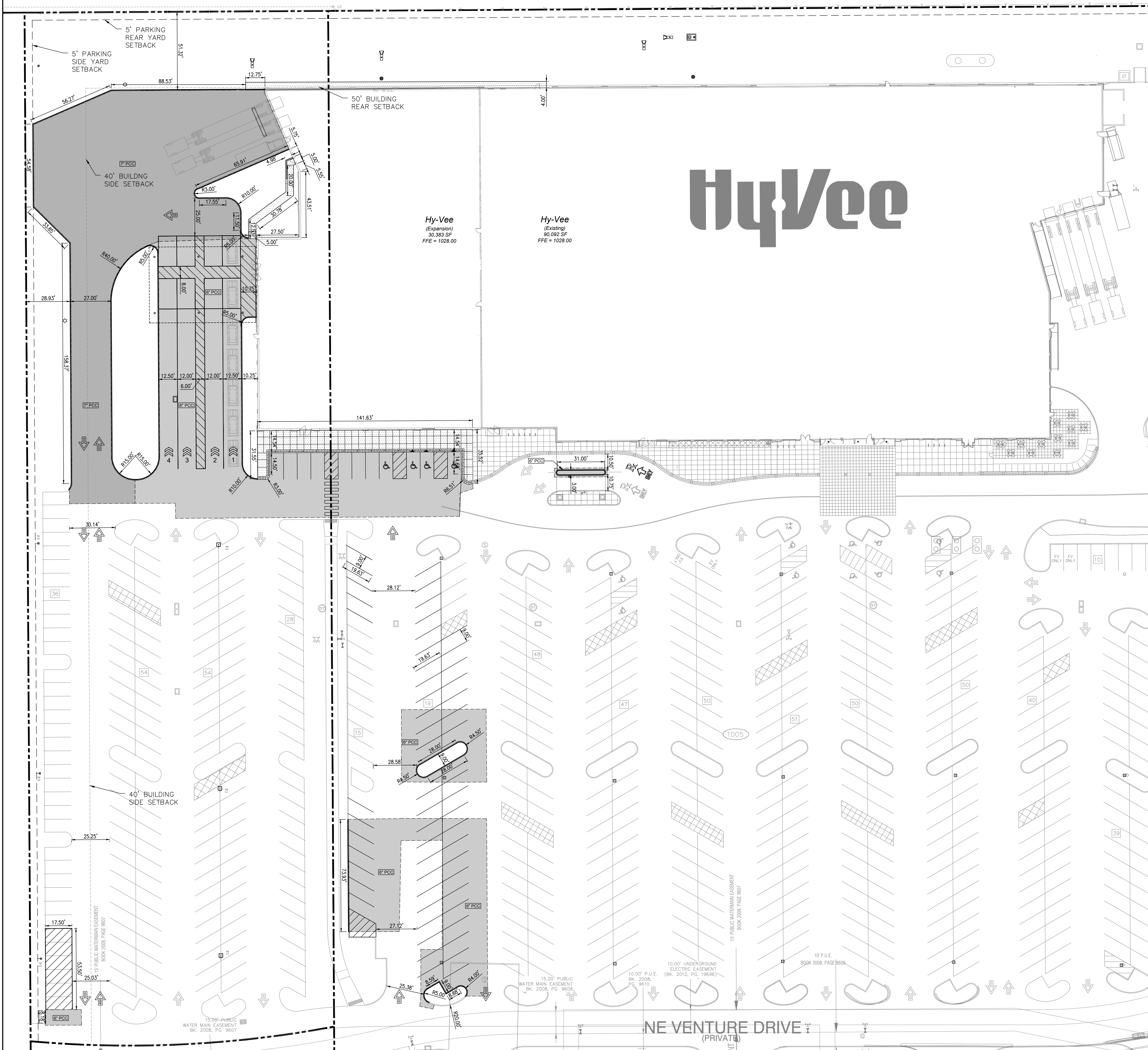
FLOOD ZONE DESIGNATION
PROPERTY IS LOCATED IN ZONE 'X' ON THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP NO. 19049C0355F WITH A REVISED DATE OF DECEMBER 07, 2018.

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 - PROTECT ALL MARKINGS FROM DAMAGE UNTIL PAINT IS DRY.



LEGEND

- PROPERTY LINE
 - - - - - EASEMENT/SETBACK LINE
 - - - - - CONSTRUCTION LIMITS
 - ▲ TRAFFIC SIGNAGE
 - BOLLARD
 - ⊗ LIGHT FIXTURE
- 7" PCC
 - 6" PCC
 - 4" PCC/SIDEWALK
 - TYP TYPICAL



LOCATION
WAUKEE EXPANSION
1005 E. HICKMAN ROAD

REVISIONS	DATE	DRAWN BY

**PRELIMINARY
NOT FOR
CONSTRUCTION**



**DIMENSION
PLAN**

DRAWN BY RAH	DATE 03/09/2022
SCALE 1"=30'	JOB 007.081
SHEET	

C2.2

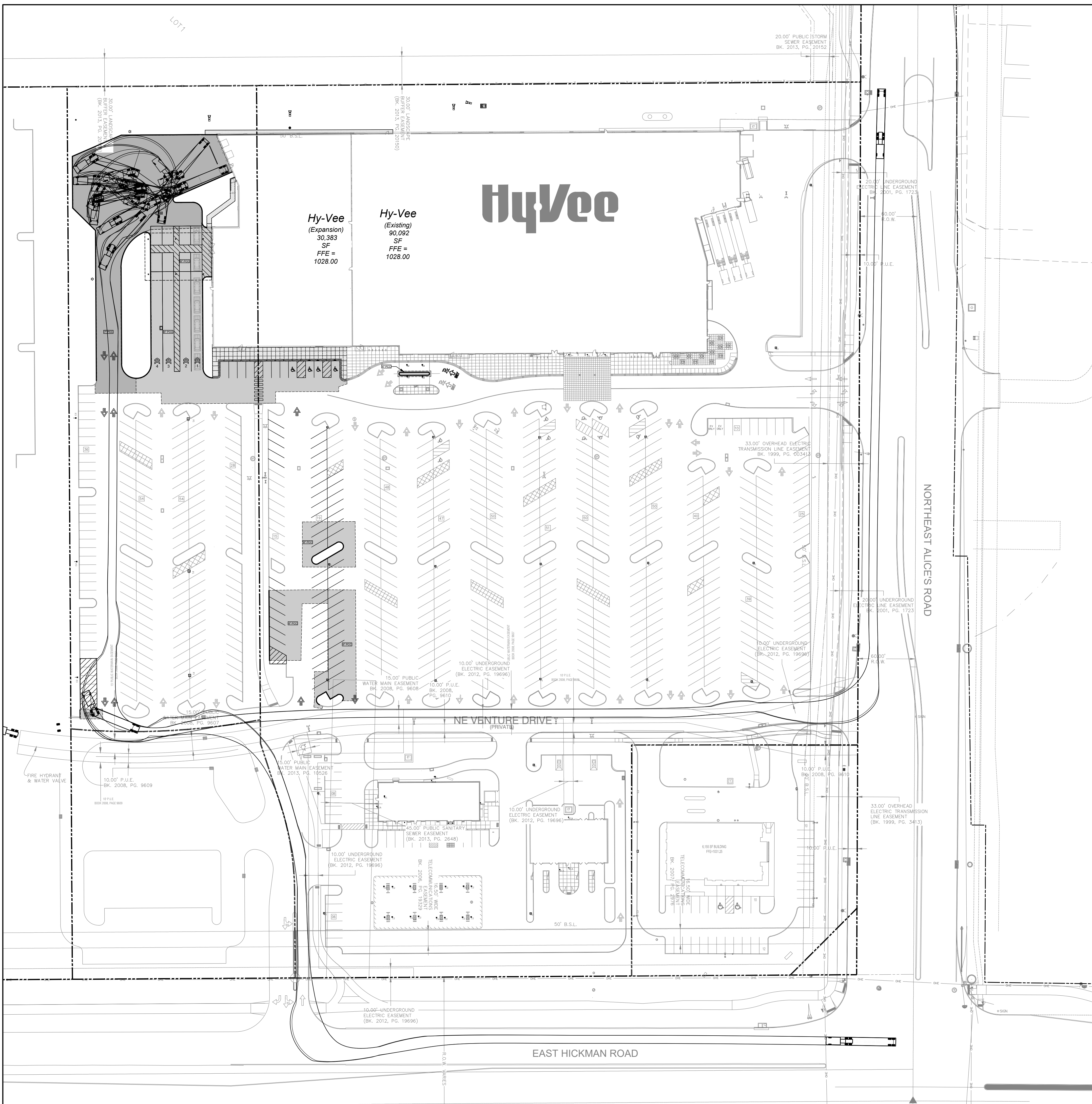
LOCATION
WAUKEE EXPANSION
1005 E. HICKMAN ROAD

REVISIONS DATE
DRAWN BY

SEMI-TRAILER
VEHICLE
CIRCULATION
PLAN

DRAWN BY RAH	DATE 03/09/2022
SCALE 1"=50'	JOB 007.081
SHEET	

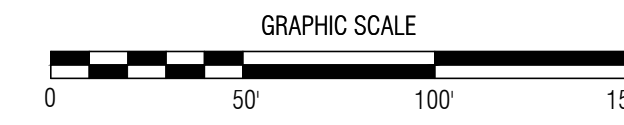
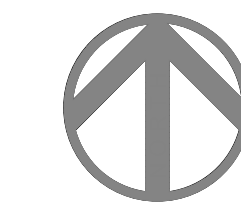
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VEHICLE TRACKER PERFORMED WITH 53 FOOT SEMI-TRAILER TURN RADIUS CAPABILITY.

FOR INFORMATIONAL PURPOSES ONLY.

**PRELIMINARY
NOT FOR CONSTRUCTION**



LOCATION
WAUKEE EXPANSION
1005 E. HICKMAN ROAD

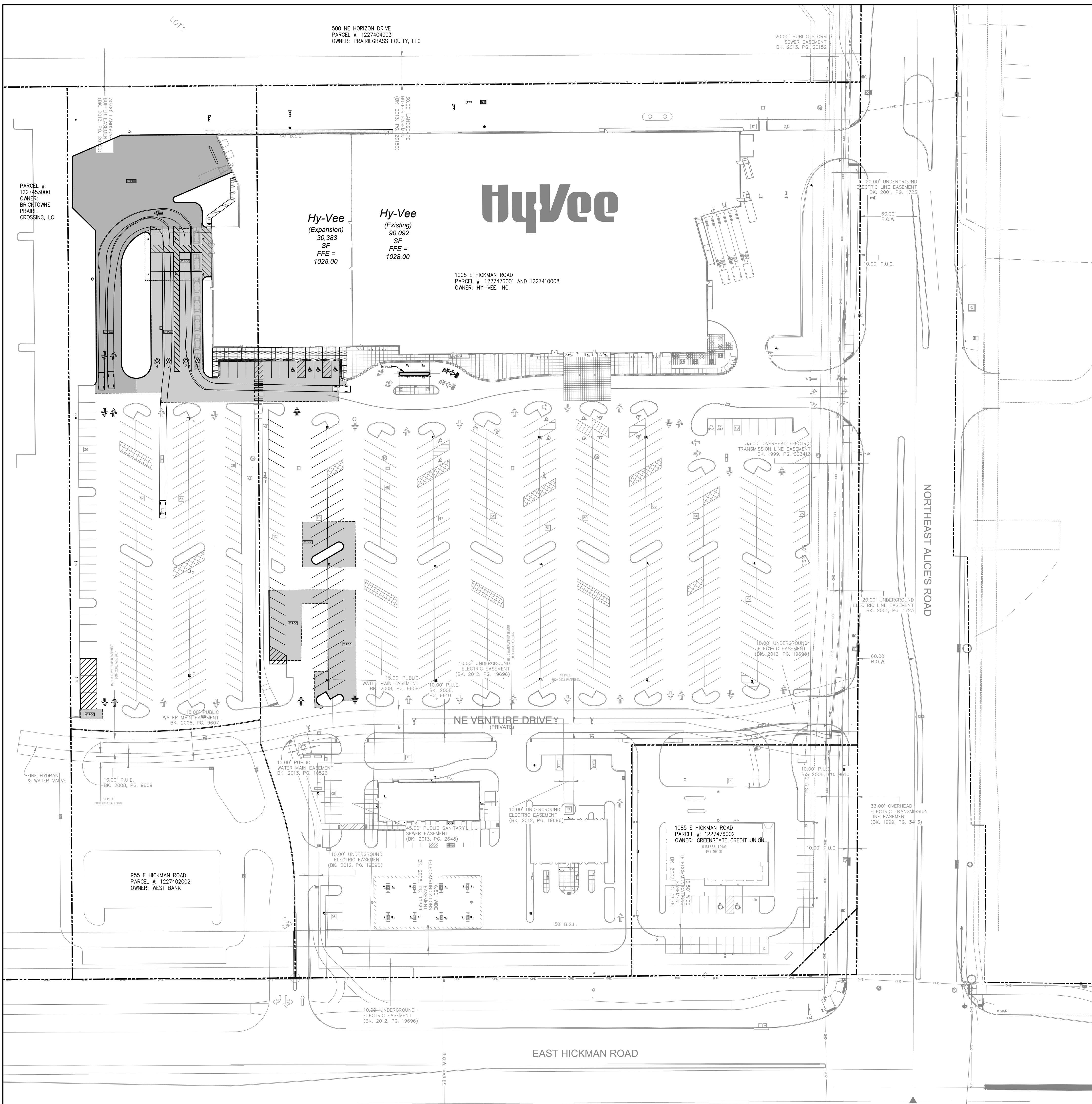
REVISIONS	DATE

	DATE

PASSENGER
VEHICLE
CIRCULATION
PLAN

DRAWN BY RAH	DATE 03/09/2022
SCALE 1"=50'	JOB 007.081
SHEET	

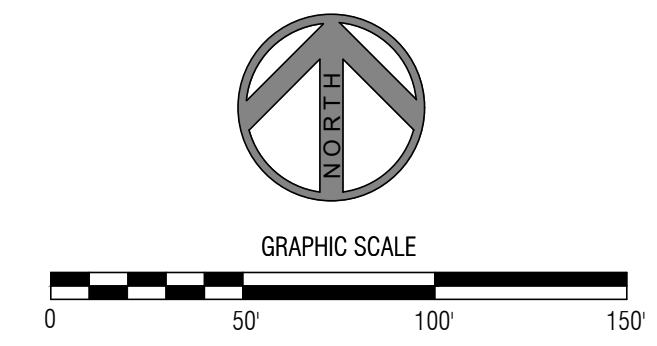
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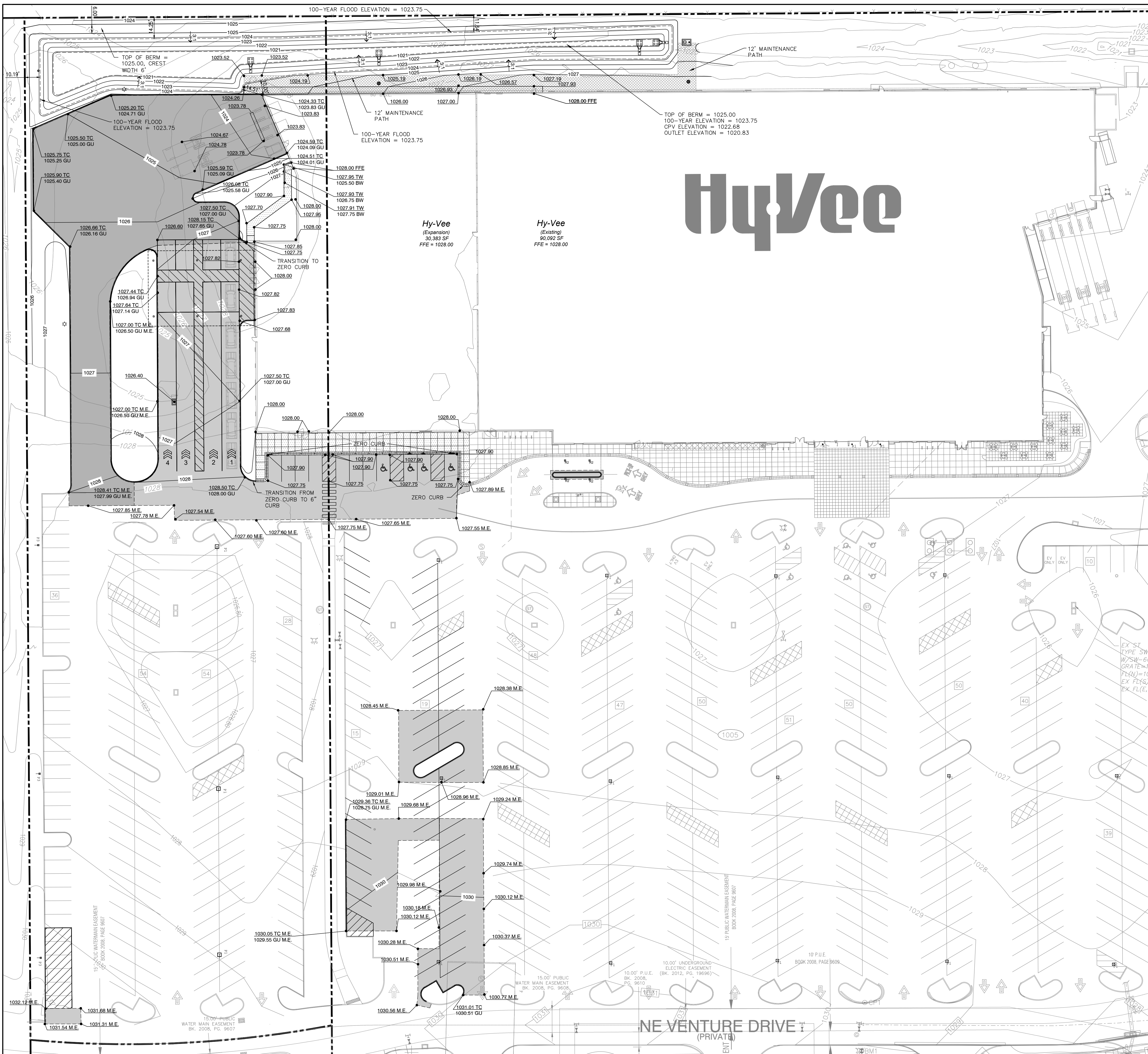


VEHICLE TRACKER PERFORMED WITH 3/4 TON CHEVY SUBURBAN TURN RADIUS CAPABILITY.

FOR INFORMATIONAL PURPOSES ONLY.

**PRELIMINARY
NOT FOR CONSTRUCTION**





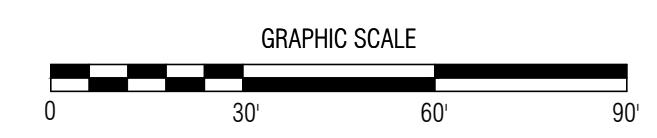
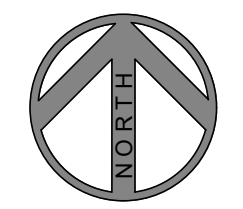
GRADING NOTES

1. STRIP TOPSOIL (MIN 8") FROM ENTIRE SITE AND STOCKPILE IN AREA DESIGNATED BY OWNER. TOPSOIL TO BE REUSED AS TOP DRESSINGS ON ALL UNSURFACED AREAS UPON COMPLETION OF THE ROUGH GRADING. TOP DRESSING SHALL BE A MINIMUM UNIFORM THICKNESS OF 8".
2. PROVIDE AND MAINTAIN EROSION CONTROL DEVICES WHERE SHOWN ON PLANS. DEVICES TO REMAIN IN PLACE UNTIL PAVEMENT AND INTAKES ARE CONSTRUCTED AND UNTIL A LAWN IS ESTABLISHED.
3. IN AREAS TO RECEIVE ADDITIONAL FILL OVER EXISTING FILL MATERIALS, REMOVE TOP 12" OF MATERIAL AND SCARIFY AND RECOMPACT THE NEXT 9" OF RESULTING SUBGRADE. COMPACT TO 95% STANDARD PROCTOR DENSITY. SUBSEQUENT FILL TO BE COMPACTED TO 95% STANDARD PROCTOR DENSITY TO WITHIN 1.0' OF FINAL SUBGRADE. THE FINAL 1.0' OF FILL TO BE COMPACTED TO 98% STANDARD PROCTOR.
4. SCARIFY AND RECOMPACT THE TOP 9" OF SUBGRADE IN ALL CUT AREAS AFTER ROUGH GRADING IS COMPLETED. COMPACT THE ENTIRE PAVING AND BUILDING SUBGRADE TO 95% STANDARD PROCTOR DENSITY TO WITHIN 1.0' OF FINAL SUBGRADE. THE FINAL 1.0' OF FILL TO BE COMPACTED TO 98% STANDARD PROCTOR.
5. PROVIDE MINIMUM OF 1.0' OF COMPACTED NON-EXPANSIVE COHESIVE SOIL BENEATH ALL PAVEMENTS.
6. ALL FILL AND BACKFILL MATERIALS SHALL BE APPROVED BY THE SOILS ENGINEER. PLACE ALL FILLS IN LIFTS OF NINE INCHES OR LESS LOOSE THICKNESS. ALL FILL SHALL BE PLACED BETWEEN 1% BELOW AND 4% ABOVE OPTIMUM MOISTURE CONTENT.
7. FINISH CONTOURS SHOWN ARE TO TOP OF PAVEMENT OR TO TOP OF TOPSOIL. SEE BUILDING PLANS AND CONSTRUCTION DETAILS FOR FINISHED SUBGRADE BELOW FINISHED FLOOR AND PAVEMENT SECTIONS.
8. SCARIFY SUBGRADE TO DEPTH OF 3" WHERE TOPSOIL IS SCHEDULED. SCARIFY IN AREAS WHERE EQUIPMENT USED FOR HAULING AND SPREADING TOPSOIL HAS CAUSED COMPACTED SUBSOIL.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES PRIOR TO CONSTRUCTION, BOTH PUBLIC AND PRIVATE.
10. SPOT ELEVATIONS ARE SHOWN AT TOP OF FINISH GRADE, ADD 6" TO ELEVATIONS IN PAVED AREAS TO FIND TOP OF CURB ELEVATIONS.

LEGEND

	100	CONTOUR LINE
	100.00	SPOT ELEVATION
	100.50 TC 100.00 GU	CURB ELEVATION/ GUTTER ELEVATION
		FLOWLINE
	1.0%	SLOPE PERCENT

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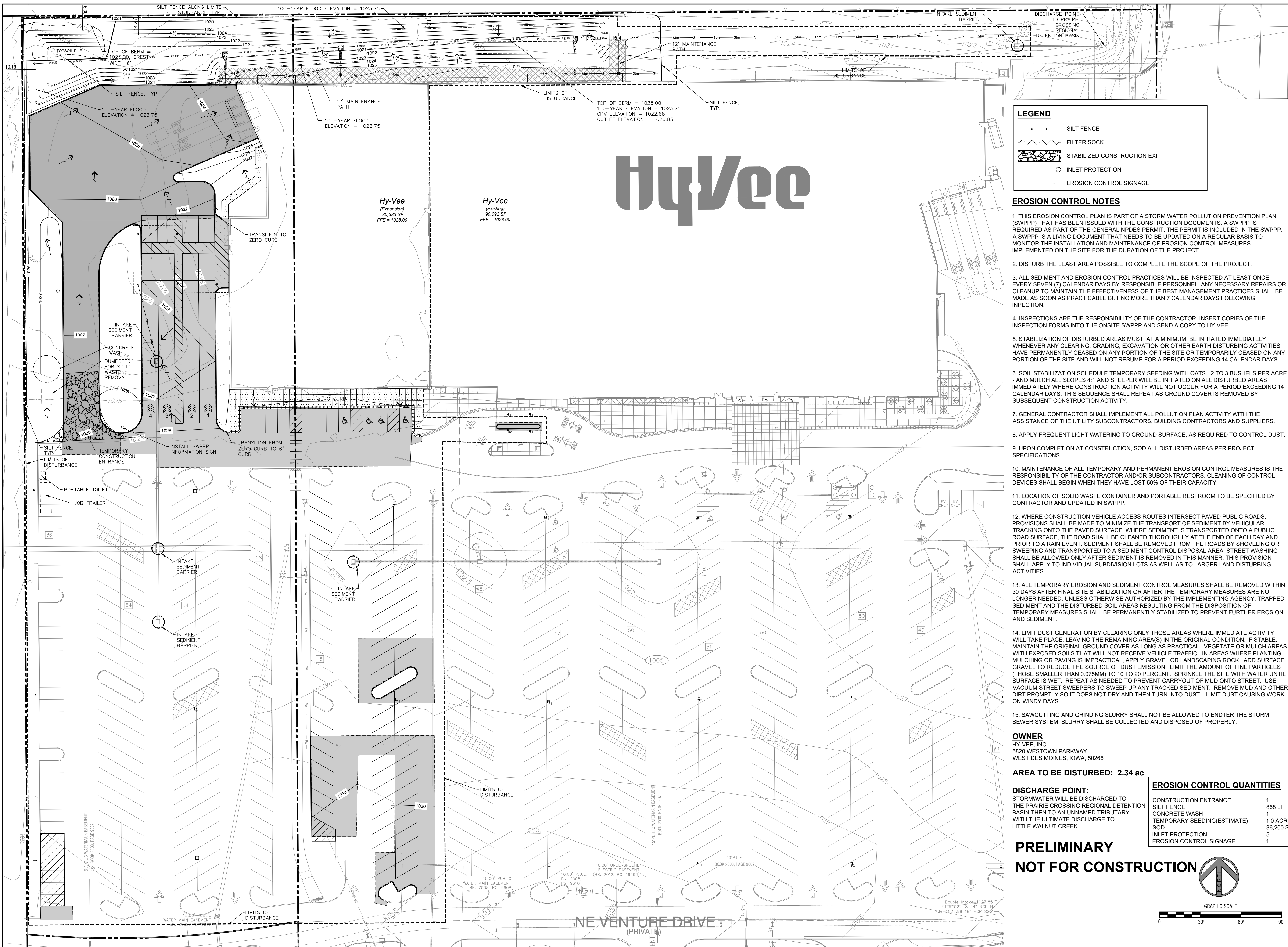
LOCATION
WAUKEE EXPANSION
1005 E. HICKMAN ROAD

REVISIONS	DATE	DRAWN BY

GRADING
PLAN

DRAWN BY RAH	DATE 03/09/2022
SCALE 1"=30'	JOB 007.081
SHEET	

C3.0



LEGEND

- SILT FENCE
- FILTER SOCK
- STABILIZED CONSTRUCTION EXIT
- INLET PROTECTION
- EROSION CONTROL SIGNAGE

- EROSION CONTROL NOTES**
- THIS EROSION CONTROL PLAN IS PART OF A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) THAT HAS BEEN ISSUED WITH THE CONSTRUCTION DOCUMENTS. A SWPPP IS REQUIRED AS PART OF THE GENERAL NPDES PERMIT. THE PERMIT IS INCLUDED IN THE SWPPP. A SWPPP IS A LIVING DOCUMENT THAT NEEDS TO BE UPDATED ON A REGULAR BASIS TO MONITOR THE INSTALLATION AND MAINTENANCE OF EROSION CONTROL MEASURES IMPLEMENTED ON THE SITE FOR THE DURATION OF THE PROJECT.
 - DISTURB THE LEAST AREA POSSIBLE TO COMPLETE THE SCOPE OF THE PROJECT.
 - ALL SEDIMENT AND EROSION CONTROL PRACTICES WILL BE INSPECTED AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS BY RESPONSIBLE PERSONNEL. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE BEST MANAGEMENT PRACTICES SHALL BE MADE AS SOON AS PRACTICABLE BUT NO MORE THAN 7 CALENDAR DAYS FOLLOWING INSPECTION.
 - INSPECTIONS ARE THE RESPONSIBILITY OF THE CONTRACTOR. INSERT COPIES OF THE INSPECTION FORMS INTO THE ONSITE SWPPP AND SEND A COPY TO HY-VEE.
 - STABILIZATION OF DISTURBED AREAS MUST, AT A MINIMUM, BE INITIATED IMMEDIATELY WHENEVER ANY CLEARING, GRADING, EXCAVATION OR OTHER EARTH DISTURBING ACTIVITIES HAVE PERMANENTLY CEASED ON ANY PORTION OF THE SITE OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS.
 - SOIL STABILIZATION SCHEDULE TEMPORARY SEEDING WITH OATS - 2 TO 3 BUSHELS PER ACRE - AND MULCH ALL SLOPES 4:1 AND STEEPER WILL BE INITIATED ON ALL DISTURBED AREAS IMMEDIATELY WHERE CONSTRUCTION ACTIVITY WILL NOT OCCUR FOR A PERIOD EXCEEDING 14 CALENDAR DAYS. THIS SEQUENCE SHALL REPEAT AS GROUND COVER IS REMOVED BY SUBSEQUENT CONSTRUCTION ACTIVITY.
 - GENERAL CONTRACTOR SHALL IMPLEMENT ALL POLLUTION PLAN ACTIVITY WITH THE ASSISTANCE OF THE UTILITY SUBCONTRACTORS, BUILDING CONTRACTORS AND SUPPLIERS.
 - APPLY FREQUENT LIGHT WATERING TO GROUND SURFACE, AS REQUIRED TO CONTROL DUST.
 - UPON COMPLETION AT CONSTRUCTION, SOD ALL DISTURBED AREAS PER PROJECT SPECIFICATIONS.
 - MAINTENANCE OF ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES IS THE RESPONSIBILITY OF THE CONTRACTOR AND/OR SUBCONTRACTORS. CLEANING OF CONTROL DEVICES SHALL BEGIN WHEN THEY HAVE LOST 50% OF THEIR CAPACITY.
 - LOCATION OF SOLID WASTE CONTAINER AND PORTABLE RESTROOM TO BE SPECIFIED BY CONTRACTOR AND UPDATED IN SWPPP.
 - WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ONTO THE PAVED SURFACE. WHERE SEDIMENT IS TRANSPORTED ONTO A PUBLIC ROAD SURFACE, THE ROAD SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY AND PRIOR TO A RAIN EVENT. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER. THIS PROVISION SHALL APPLY TO INDIVIDUAL SUBDIVISION LOTS AS WELL AS TO LARGER LAND DISTURBING ACTIVITIES.
 - ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE IMPLEMENTING AGENCY. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENT.
 - LIMIT DUST GENERATION BY CLEARING ONLY THOSE AREAS WHERE IMMEDIATE ACTIVITY WILL TAKE PLACE, LEAVING THE REMAINING AREA(S) IN THE ORIGINAL CONDITION, IF STABLE. MAINTAIN THE ORIGINAL GROUND COVER AS LONG AS PRACTICAL. VEGETATE OR MULCH AREAS WITH EXPOSED SOILS THAT WILL NOT RECEIVE VEHICLE TRAFFIC. IN AREAS WHERE PLANTING, MULCHING OR PAVING IS IMPRACTICAL, APPLY GRAVEL OR LANDSCAPING ROCK. ADD SURFACE GRAVEL TO REDUCE THE SOURCE OF DUST EMISSION. LIMIT THE AMOUNT OF FINE PARTICLES (THOSE SMALLER THAN 0.075MM) TO 10 TO 20 PERCENT. SPRINKLE THE SITE WITH WATER UNTIL SURFACE IS WET. REPEAT AS NEEDED TO PREVENT CARRYOUT OF MUD ONTO STREET. USE VACUUM STREET SWEEPERS TO SWEEP UP ANY TRACKED SEDIMENT. REMOVE MUD AND OTHER DIRT PROMPTLY SO IT DOES NOT DRY AND THEN TURN INTO DUST. LIMIT DUST CAUSING WORK ON WINDY DAYS.
 - SAWCUTTING AND GRINDING SLURRY SHALL NOT BE ALLOWED TO ENTER THE STORM SEWER SYSTEM. SLURRY SHALL BE COLLECTED AND DISPOSED OF PROPERLY.

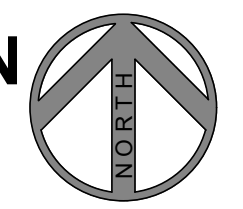
OWNER
HY-VEE, INC.
5820 WESTOWN PARKWAY
WEST DES MOINES, IOWA, 50266

AREA TO BE DISTURBED: 2.34 ac

DISCHARGE POINT:
STORMWATER WILL BE DISCHARGED TO THE PRAIRIE CROSSING REGIONAL DETENTION BASIN THEN TO AN UNNAMED TRIBUTARY WITH THE ULTIMATE DISCHARGE TO LITTLE WALNUT CREEK

EROSION CONTROL QUANTITIES	
CONSTRUCTION ENTRANCE	1
SILT FENCE	868 LF
CONCRETE WASH	1
TEMPORARY SEEDING (ESTIMATE)	1.0 ACRE
SOD	36,200 SF
INLET PROTECTION	5
EROSION CONTROL SIGNAGE	1

PRELIMINARY
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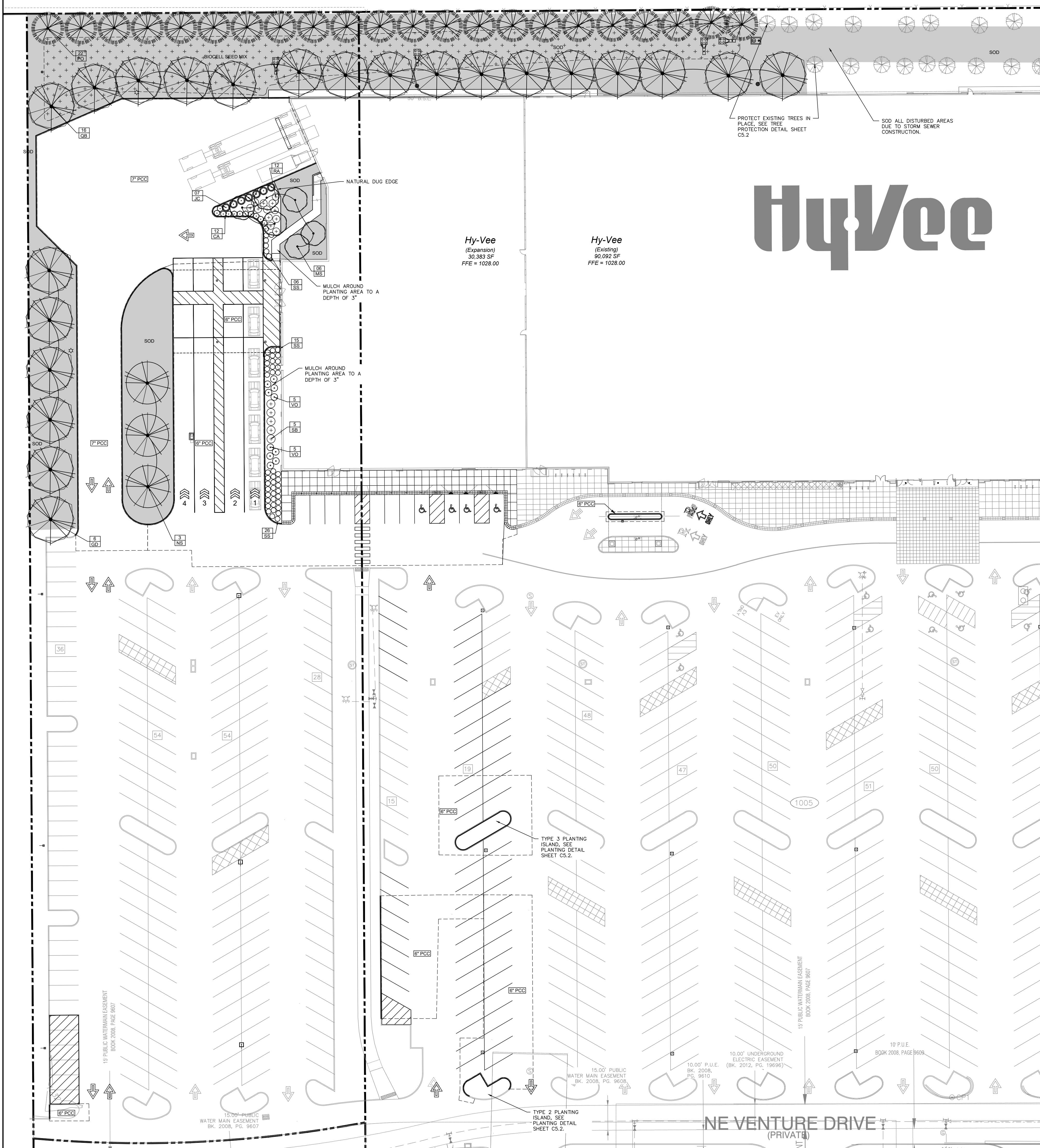
LOCATION
WAUKEE EXPANSION
1005 E. HICKMAN ROAD

REVISIONS	DATE	DRAWN BY

EROSION & SEDIMENT CONTROL PLAN

DRAWN BY RAH	DATE 03/09/2022
SCALE 1"=30'	JOB 007.081
SHEET	

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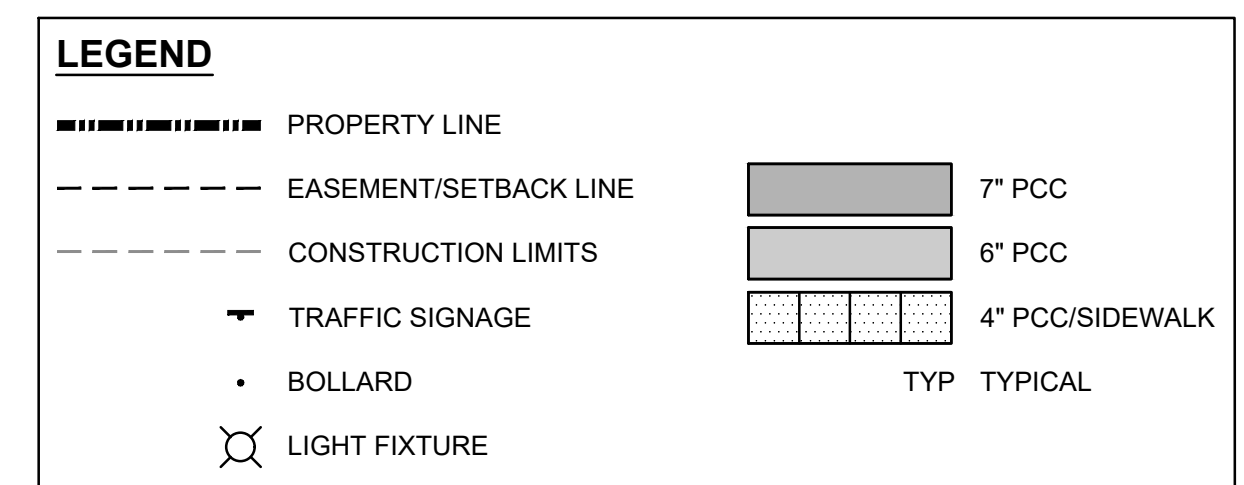
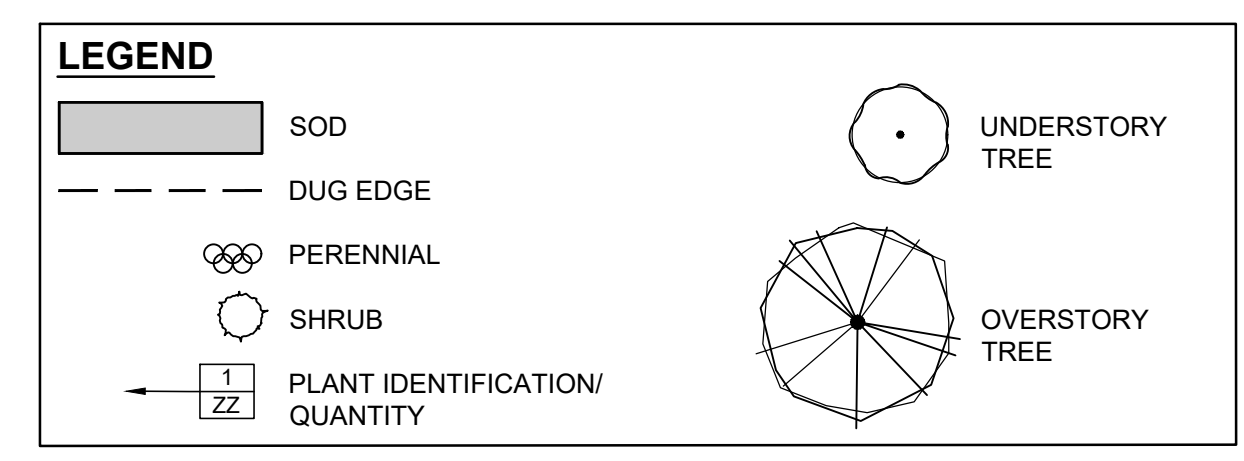


PLANTING SCHEDULE						
	QTY	ID	BOTANICAL NAME	COMMON NAME	SIZE	METHOD
TREES	06	GD	Gymnocladia dioica	KENTUCKY COFFEETREE	8' Ht.	B&B
	03	NS	Nyssa sylvatica 'Wild Fire'	WILD FIRE SWEETGUM	8' Ht.	B&B
	16	QB	Quercus bicolor	SWAMP WHITE OAK	8' Ht.	B&B
	06	MS	Malus 'Spring Snow'	SPRING SNOW CRAB	6' Ht.	B&B
	22	PO	Picea omorika	SERBIAN SPRUCE	6' Ht.	B&B
SHRUBS	10	VO	Viburnum opulus 'Nanum'	DWARF CRANBERRYBUSH	5 Gal.	Cont.
	07	JC	Juniper chinensis 'Sea-Green'	SEA GREEN JUNIPER	5 Gal.	Cont.
	12	RA	Rhus aromatica 'Gro-Low'	GRO-LOW FRAGRANT SUMAC	5 Gal.	Cont.
	05	SB	Spiraea x bumalda 'Goldflame'	GOLDFLAME SPIREA	5 Gal.	Cont.
PERENNIALS & GRASSES	12	CA	Calamagrostis x acutifolia	FEATHER REED GRASS	3 Gal.	Cont.
	47	SS	Schizachyrium scoparium	LITTLE BLUE STEM	3 Gal.	Cont.

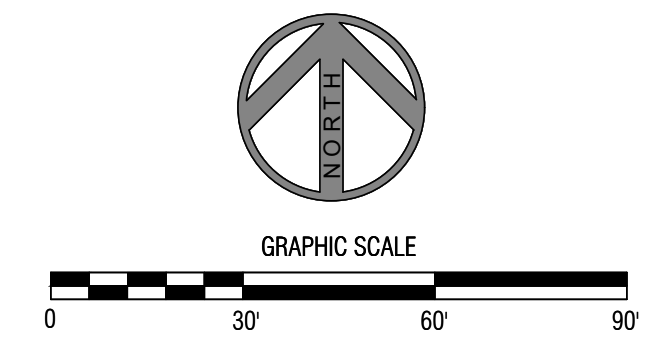
TYPE TWO PARKING ISLAND LANDSCAPE SCHEDULE								
ORNAMENTAL GRASSES								
QTY	ID	COMMON NAME	BOTANICAL NAME	SIZE	METHOD	HEIGHT	WIDTH	SPACING
18	PA	HAMELN FOUNTAIN GRASS	Pennisetum alopecuroides 'Hameln'	3 Gal.	Cont.	2'-3'	18"-24"	20" O.C.
PERENNIALS								
85	SA	AUTUMN JOY SEDUM	Sedum x 'Autumn Joy'	2 Gal.	Cont.	18"-24"	18"-24"	18" O.C.

TYPE THREE PARKING ISLAND LANDSCAPE SCHEDULE								
ORNAMENTAL GRASSES								
QTY	ID	COMMON NAME	BOTANICAL NAME	SIZE	METHOD	HEIGHT	WIDTH	SPACING
16	CA	FEATHER REED GRASS	Calamagrostis x acutifolia 'Karl Foerster'	3 Gal.	Cont.	4'-5'	2'-3'	
PERENNIALS								
84	HS	STELLA d' ORO DAYLILY	Hemerocallis 'Stella d' Oro'	3 Gal.	Cont.	18"	14"-24"	

- SCREENING AND LANDSCAPE REQUIREMENTS**
1. A MINIMUM OF 20% OF THE TOTAL LAND AREA SHALL BE OPEN SPACE
 TOTAL AREA: 853,371 SF (100%)
 IMPERVIOUS AREA: 520,773 SF (79.71%)
 OPEN SPACE AREA: 132,598 SF (20.29%)
 2. 1 TREE/1000 SF REQUIRED OPEN SPACE (PROJECT SITE)
 24 TREES REQUIRED (118,067 SF*20/1000)
 53 TREES PROVIDED
 3. 1 SHRUB/1000 SF REQUIRED OPEN SPACE (PROJECT SITE)
 24 SHRUBS REQUIRED (118,067 SF*20/1000)
 34 SHRUBS PROVIDED
 4. 30' BUFFER REQUIRED, 2 OVERSTORY, 3 EVERGREEN OR 2 ORNAMENTAL/50 LF



**PRELIMINARY
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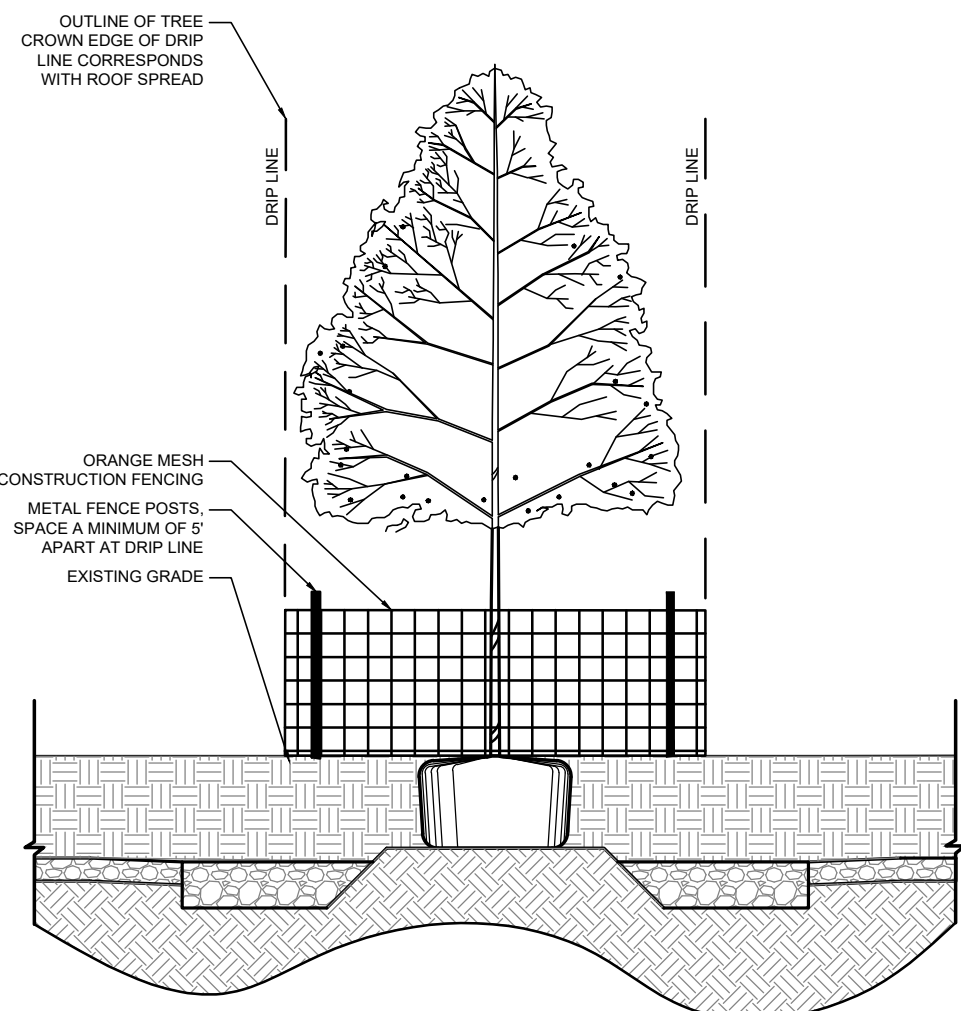


LOCATION
WAUKEE EXPANSION
1005 E. HICKMAN ROAD

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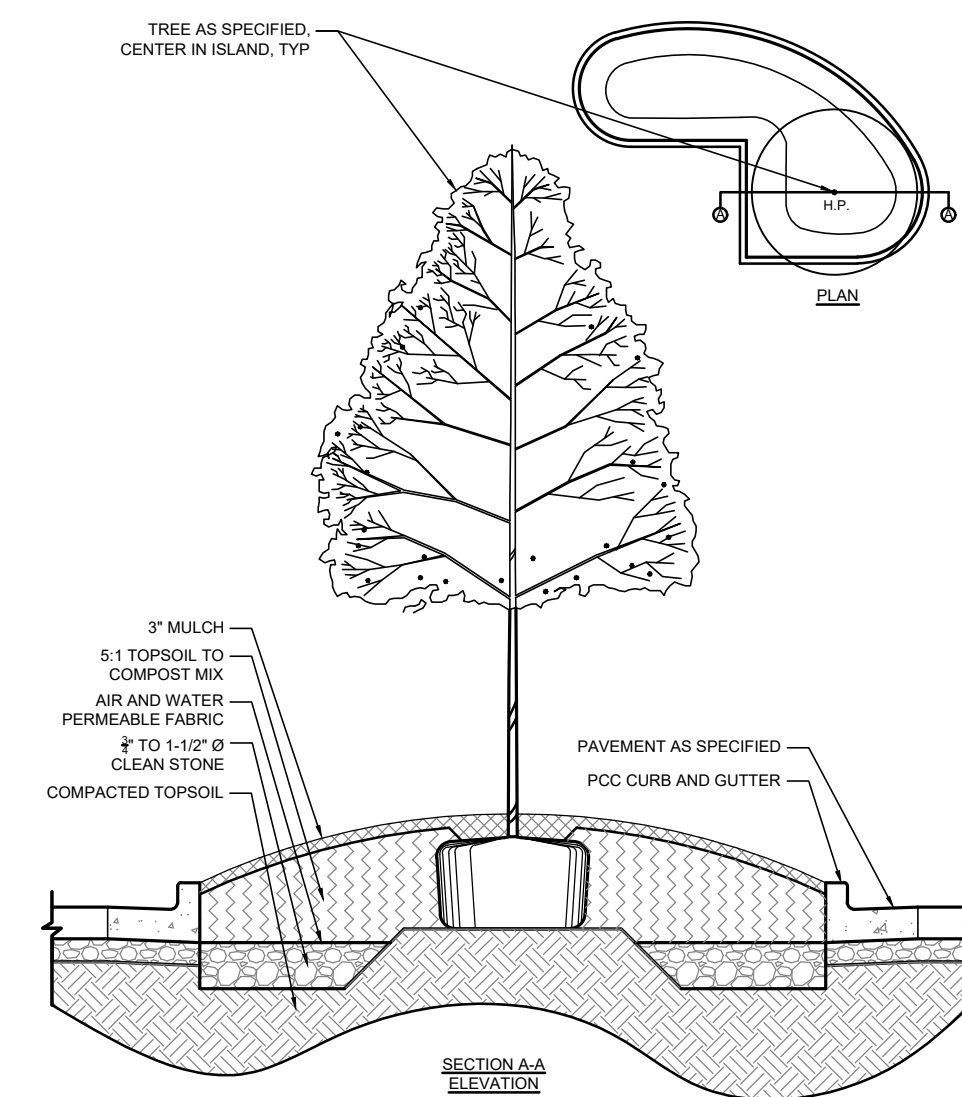
PLANTING PLAN	
DRAWN BY RAH	DATE 03/09/2022
SCALE 1"=30'	JOB 007.081
SHEET	

C5.0



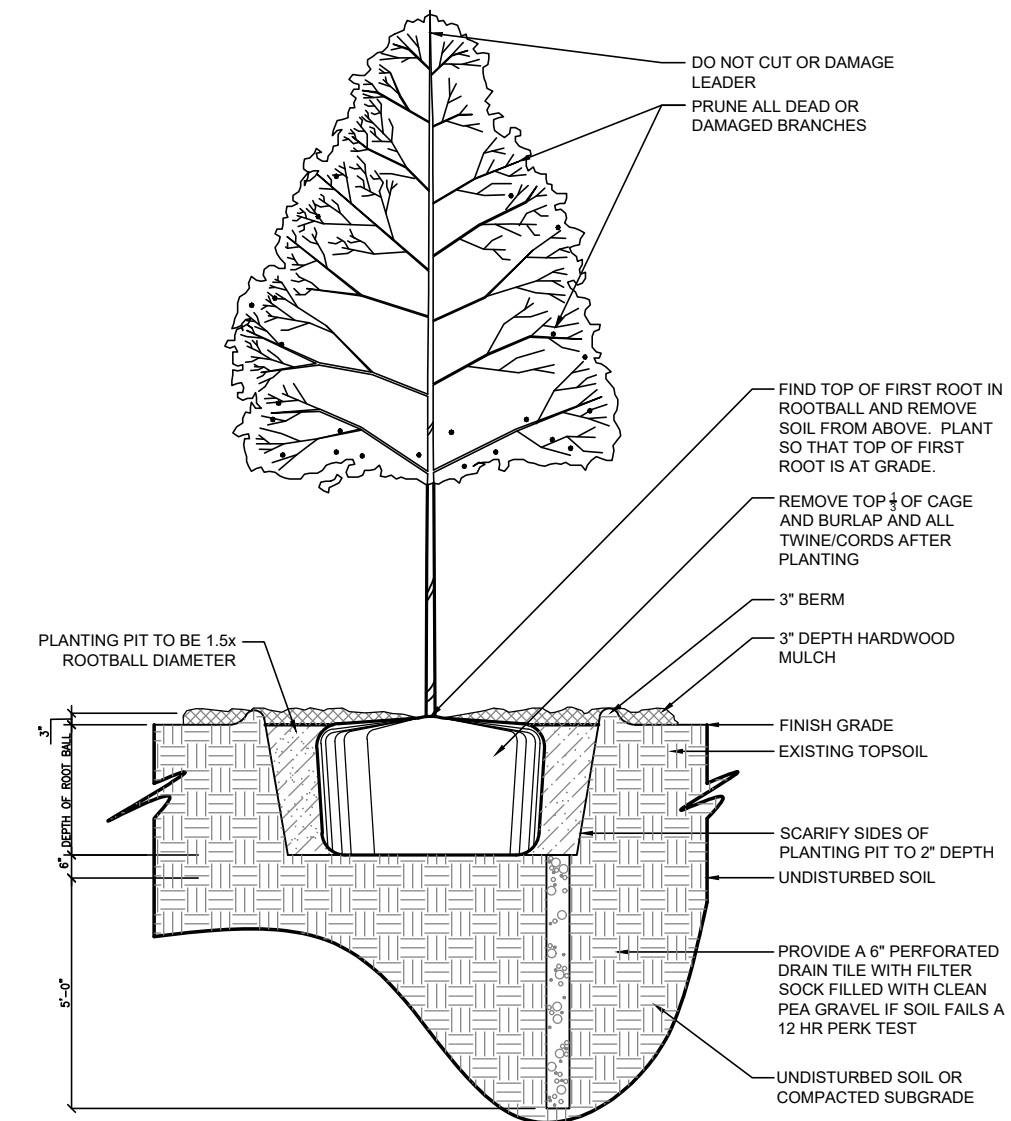
TREE PROTECTION DETAIL, TYP

SCALE: NTS	REVISION	BY	DATE
	ISSUE DATE		



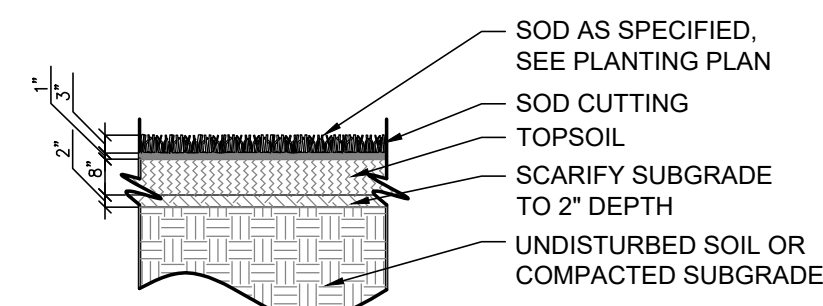
LANDSCAPE ISLAND PLANTING DETAIL, TYP

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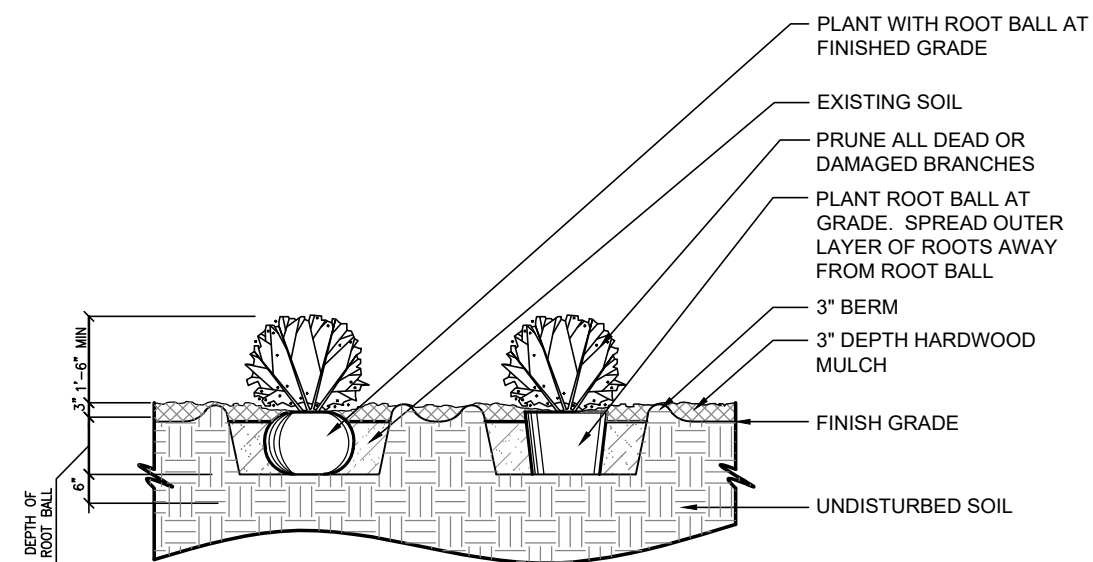
TREE PLANTING DETAIL, TYP

SCALE: NTS	REVISION	BY	DATE
	ISSUE DATE		



TURF PROFILE

SCALE: 3/8"=1'-0"	REVISION	BY	DATE
	ISSUE DATE		

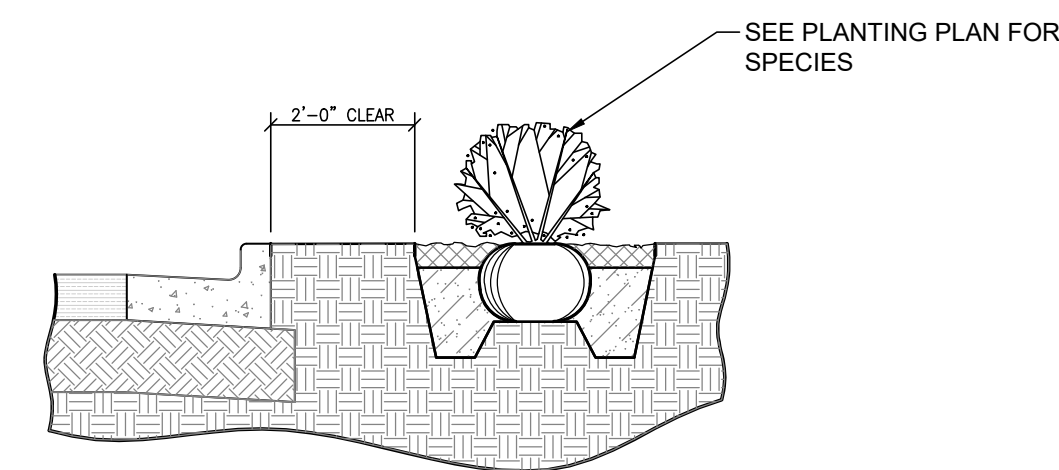


NOTES:

1. PRUNE ALL DEAD AND DAMAGED BRANCHES.
2. REMOVE ENTIRE CONTAINER FROM CONTAINER GROWN PLANTS.
3. REMOVE 1/4 OF THE CAGE AND BURLAP FROM BALLED AND BURLAPPED PLANTS.
4. SHAVE OFF CIRCLING ROOTS WITH PRUNING SAW PRIOR TO PLANTING.
5. PLANTING PIT TO BE 1.5X ROOTBALL DIAMETER.

SHRUB PLANTING DETAIL

SCALE: NTS	REVISION	BY	DATE
	ISSUE DATE		



PARKING LOT EDGE PLANTING DETAIL

SCALE: 3/8"=1'-0"	REVISION	BY	DATE
	ISSUE DATE		

GENERAL NOTES

1. ALL PLANT MATERIAL INSTALLATION, INCLUDING SEED AND SOD, SHALL BE COMPLETED PRIOR TO GRAND OPENING.
2. ALL PLANT MATERIAL SHALL MEET MINIMUM REQUIREMENTS SHOWN IN THE "AMERICAN STANDARD FOR NURSERY STOCK" (ANSI Z60.1-LATEST ADDITION).
3. NO PLANT MATERIAL SHALL BE SUBSTITUTED WITHOUT THE APPROVAL OF HY-VEE, INC.
4. THE CONTRACTOR SHALL VERIFY LOCATION AND PROTECT ALL UTILITIES AND STRUCTURES. DAMAGE TO UTILITIES AND STRUCTURES SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE OWNER OF THE UTILITIES
5. PLANT MATERIAL QUANTITIES ARE FOR CONTRACTORS' CONVENIENCE. DRAWINGS SHALL GOVERN.
6. SEE THE GRADING, UTILITY, AND SITE PLANS FOR ADDITIONAL INFORMATION.
7. PROVIDE A ONE-YEAR WARRANTY ON ALL TREES, SHRUBS AND PERENNIALS.

SOIL PREPARATION:

1. TOPSOIL SHALL BE LOCAL FERTILE AGRICULTURAL SOIL FREE OF SUBSOILS, ROCKS, CLAYS, PLANTS, WEEDS, ROOTS AND OTHER IMPURITIES. PH VALUE SHALL BE BETWEEN 5.4 AND 7.0.
2. REMOVE DEBRIS AND WEEDS FROM SUBSOIL.
3. SCARIFY SUBSOIL TO DEPTH OF 2" PRIOR TO PLACING TOPSOIL.
4. SPREAD TOPSOIL TO A MINIMUM DEPTH OF 8". TOPSOIL PLACEMENT SHALL TAKE PLACE DURING DRY WEATHER. PREPARE TOPSOIL SO THAT IT IS FREE OF DEBRIS AND GRADED TO DRAIN AS INDICATED ON GRADING PLANS.
5. LIGHTLY COMPACT TOPSOIL AFTER PLACEMENT AND PROHIBIT CONSTRUCTION TRAFFIC FROM AREAS WITH TOPSOIL.

SEEDING:

1. SUBMIT SEED MIXES, FERTILIZER, AND MULCH DATA TO OWNER'S REPRESENTATIVE.
2. SEED MIXTURE SHALL BE 90% TURF TYPE TALL FESCUE AND 10% TURF TYPE PERENNIAL RYEGRASS.
3. FERTILIZER FOR SEEDED AREAS SHALL BE NITROGEN 10%, PHOSPHORIC ACID 10%, SOLUBLE POTASH 10%.
4. APPLY FERTILIZER AT APPLICATION RATE OF 1LB/1000 SF.
5. APPLY SEED AT RATE OF 10LBS/1000 SF EVENLY IN TWO DIRECTIONS.
6. MULCH SEEDED AREAS IMMEDIATELY AFTER SOWING WITH STRAW OR A BIODEGRADABLE MATTING WITH OPEN WEAVE
7. WATER NEWLY SEEDED AREAS SO THAT SOIL IS SATURATED TO DEPTH OF TOPSOIL.
8. HYDROSEEDING: FERTILIZER, MULCH, AND SEED SLURRY SHALL BE APPLIED WITH A HYDRAULIC SEEDER AT A RATE OF 2,000LBS/ACRE, EVENLY.
9. SEEDED AREAS WILL BE ACCEPTED WHEN GRASS IS WELL ESTABLISHED AND EXHIBITS VIGOROUS GROWING CONDITIONS WITH NO BARE SPOTS EXCEEDING 1 SF. CONTRACTOR IS RESPONSIBLE FOR WATERING SEED UNTIL ACCEPTED.

SOD:

1. SOD SHALL BE NURSERY GROWN GRADE; CULTIVATED GRASS SOD WITH STRONG FIBROUS ROOT SYSTEM FREE OF STONES, BURNED OR BARE SPOTS CONTAINING NO MORE THAN 5 WEEDS PER 1000 SF.
2. SOD MIXTURE SHALL BE 40% KENTUCKY BLUEGRASS, 30% PERENNIAL RYEGRASS, 30% FINE FESCUES
3. FERTILIZER FOR SODDED AREAS SHALL BE NITROGEN 10%, PHOSPHORIC ACID 10%, SOLUBLE POTASH 10%.
4. APPLY FERTILIZER AT APPLICATION RATE OF 1LB/1000 SF TO TOPSOIL PRIOR TO PLACING SOD.
5. MOISTEN PREPARED SOIL IMMEDIATELY PRIOR TO LAYING SOD. LAY SOD IMMEDIATELY UPON DELIVERY TO THE SITE, LEAVING NO OPEN JOINTS OR OVERLAPPING JOINTS. DO NOT STRETCH SOD. DO NOT LAY SOD IF TEMPERATURE IS BELOW FREEZING.
6. ROLL SOD WITH 1/3 FULL ROLLER AFTER SOD AND SOIL HAVE DRIED. ROLL BEFORE THE FIRST WATERING.
7. SOD WILL BE ACCEPTED WHEN IT IS WELL ESTABLISHED AND SHOWS VIGOROUS GROWTH WITH NO BARE SPOTS EXCEEDING 1 SF. CONTRACTOR IS RESPONSIBLE FOR WATERING AND REPLACING SOD AS NEEDED UNTIL ACCEPTED.

PLANTING:

1. PRESERVE AND PROTECT EXISTING TREES TO REMAIN. CONTRACTOR SHALL ERECT 4' CONSTRUCTION FENCE AROUND PERIMETER OF TREES AT THE DRIP LINE. CONTRACTOR SHALL NOT STORE MATERIALS OR ALLOW VEHICLES TO ACCESS OR PARK INSIDE DRIP LINES.
2. DO NOT INSTALL PLANTS WHEN AMBIENT TEMPERATURES DROP BELOW 35° F. OR RISE ABOVE 90° F. DO NOT INSTALL PLANTS WHEN WIND VELOCITIES EXCEED 30 MPH.
3. DAMAGED OR DEFICIENT PLANTS WILL BE REJECTED.
4. TREES WILL HAVE A REASONABLY STRAIGHT TRUNK AND SINGLE LEADER.
5. SOIL AMENDMENTS SHALL BE TOPSOIL OR COMPOST. COMPOST: DECOMPOSED, STABLE, WEED FREE ORGANIC MATTER DERIVED FROM AGRICULTURAL, FOOD, INDUSTRIAL RESIDUALS, BIOSOLIDS, OR YARD TRIMMINGS. COMPOST WILL BE FREE OF LARGE PARTICLES AND WILL POSSESS NO OBJECTIONABLE ODOR, NOR RESEMBLE THE MATERIAL FROM WHICH IT WAS DERIVED
6. MULCH: COMPOSTED, SHREDDED HARDWOOD BARK, DARK BROWN IN COLOR.
7. FILL PLANTING PITS WITH WATER TO DETERMINE DRAINAGE. IF WATER REMAINS IN HOLE AFTER 24 HOURS, INSTALL FRENCH DRAIN AS SHOWN IN DETAILS TO INSURE PROPER DRAINAGE.
8. INITIAL ACCEPTANCE: UPON COMPLETION OF PLANTING, OWNER'S REPRESENTATIVE WILL REVIEW WORK AND TAKE INITIAL ACCEPTANCE OF WORK UPON CORRECTION OF ANY NOTED DEFICIENCIES.

IRRIGATION

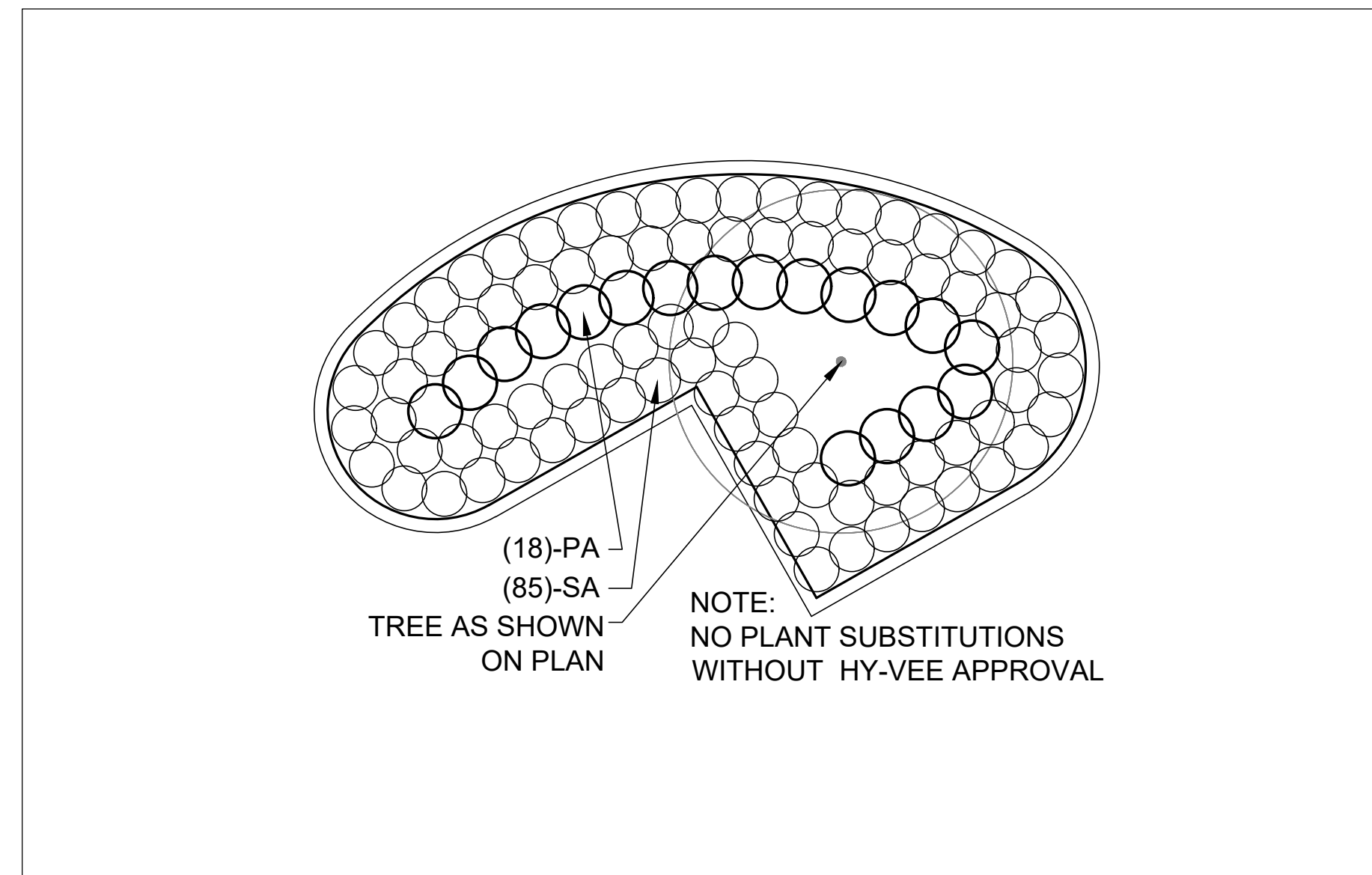
1. CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND FURNISHING ALL LABOR, MATERIALS, ACCESSORIES, EQUIPMENT AND OPERATIONS NECESSARY FOR INSTALLATION OF IRRIGATION SYSTEM.
2. CONTRACTOR TO SUBMIT IRRIGATION SYSTEM DESIGN AND COMPONENT CUT SHEETS TO HY-VEE FOR REVIEW AND APPROVAL PRIOR TO ORDERING.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL NECESSARY APPROVALS, PERMITS, LICENSES AND INSPECTIONS REQUIRED BY LOCAL, MUNICIPAL, AND STATE JURISDICTIONS.
4. SYSTEM SHALL BE ELECTRIC SOLENOID CONTROLLED UNDERGROUND IRRIGATION SYSTEM WITH PRESSURE BLOW-OUT DRAIN AS MANUFACTURED BY RAIN BIRD MANUFACTURING CORP. OR THE TORO COMPANY. SUBSTITUTIONS SUBJECT TO OWNER REVIEW AND APPROVAL.
5. AREAS TO BE IRRIGATED INCLUDE ALL SPACE INDICATED AS "SOD" ON THE PLANTING PLAN AND INCLUDE PARKING LOT ISLANDS, UNLESS OTHERWISE NOTED. PARKING LOT ISLANDS TO BE IRRIGATED VIA DRIP TYPE IRRIGATION.

MATERIALS

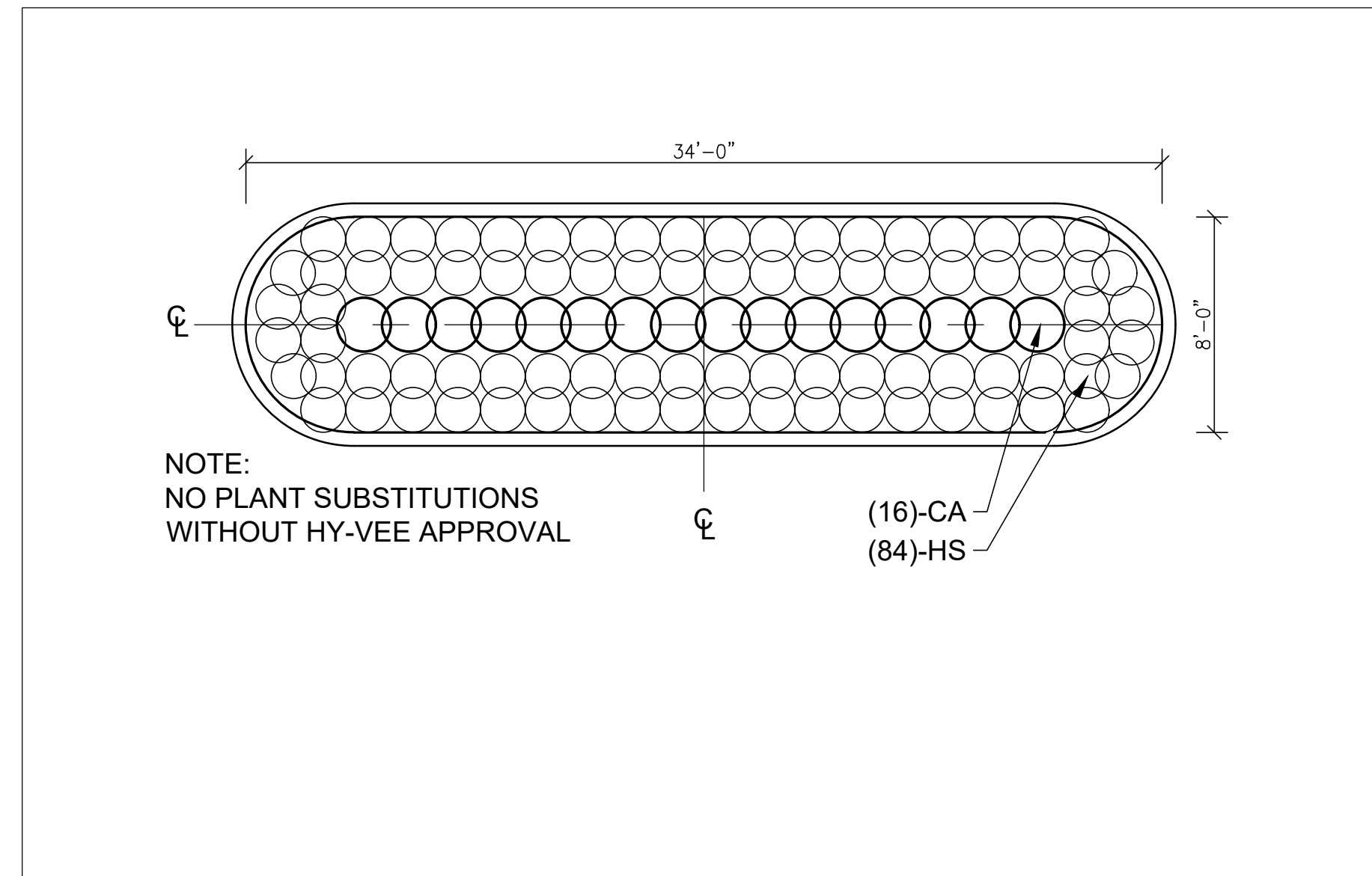
1. PIPING:
 - 1.1. PVC PIPE: ASTM D2241, 200 PSI PRESSURE RATED UPSTREAM FROM CONTROLS, 160 PSI DOWNSTREAM.
 - 1.2. COPPER PIPE: ASTM B42 REGULAR
 - 1.3. FITTINGS TO MATCH PIPE SIZE AND STYLE
 - 1.4. SOLVENT CEMENT: ASTM D2564 FOR PVC PIPE AND FITTINGS
 - 1.5. SOLDER AND FLUX: ASTM B32 TYPE 95TA SOLDER, PASTE
 - 1.6. SLEEVE MATERIAL: PVC
 - 1.7. OUTLETS: BRASS CONSTRUCTION
 - 1.8. ROTARY TYPE SPRINKLER HEAD: POP-UP TYPE WITH SCREENS; FULLY ADJUSTABLE FOR FLOW AND PRESSURE
 - 1.9. SPRAY TYPE SPRINKLER HEAD: POP-UP HEAD WITH FULL CIRCLE
 - 1.10. EMITTER: ADJUSTABLE OUTLET, NON-CLOGGING
 - 1.11. BUBBLER: ADJUSTABLE OUTLET
 - 1.12. QUICK COUPLER
2. MANUAL VALVES:
 - 1.1. GATE VALVES: BRONZE CONSTRUCTION, INSIDE SCREW WITH THREADED ENDS.
 - 1.2. BACKFLOW PREVENTERS: BRONZE BODY CONSTRUCTION, DOUBLE CHECK VALVE TYPE.
3. CONTROLS AND CONTROL VALVES:
 - 1.1. CONTROLLER: AUTOMATIC CONTROLLER, MICROPROCESSOR SOLID STATE CONTROL WITH VISIBLE READOUT DISPLAY, TEMPORARY OVERRIDE FEATURE TO BYPASS CYCLE, TIMER FOR MULTIPLE STATION SYSTEM, PROGRAMMABLE FOR QUARTER HOUR INCREMENTS, WITH AUTOMATIC START AND SHUTDOWN, RAIN SENSOR CAPABLE OF TURNING OFF THE IRRIGATION SYSTEM IF ADEQUATE RAINFALL IS RECEIVED.
 - 1.2. CONTROLLER HOUSING: NEMA 250 TYPE 3; WEATHERPROOF, WATERTIGHT, WITH LOCKABLE ACCESS DOOR.
 - 1.3. VALVES: ELECTRIC SOLENOID NORMALLY CLOSED; HYDRAULIC TUBING, WIRING, INCLUDING REQUIRED FITTINGS AND ACCESSORIES
 - 1.4. WIRE CONDUCTORS: COLOR CODED. COPPER CONDUCTOR, DIRECT BURIAL TYPE.
 - 1.5. PROVIDE RAIN SENSORS.
 - 1.6. DISCONNECT SWITCH: FACTORY MOUNTED DISCONNECT SWITCH IN CONTROL PANEL.

EXECUTION

1. VERIFY LOCATIONS AND DEPTHS OF EXISTING UTILITIES AND CONDITIONS PRIOR TO CONSTRUCTION. VERIFY THAT REQUIRED UTILITIES ARE AVAILABLE IN PROPER LOCATION, AND READY FOR USE.
2. COORDINATE LOCATION OF SLEEVES UNDER PAVING TO ACCOMMODATE SYSTEM.
3. ROUTE PIPING TO AVOID PLANTS, GROUND COVER, AND STRUCTURES
4. TRENCH TO ACCOMMODATE GRADE CHANGES AND SLOPE TO DRAINS. KEEP TRENCHES FREE OF DEBRIS AND MATERIAL THAT ARE DAMAGING TO THE PIPE.
5. PROVIDE FOR THERMAL MOVEMENTS OF COMPONENTS IN SYSTEM.
6. USE THREADED NIPPLES FOR RISERS TO EACH OUTLET.
7. PROVIDE 10 INCH EXPANSION COIL AT EACH CONTROL VALVE AND AT 100 FOOT INTERVALS. BURY WIRE BESIDE PIPE. MARK VALVES WITH NEOPRENE VALVE MARKERS CONTAINING LOCKING DEVICE. SET VALVE MARKERS IN 160 PSI PIPE RISERS EXITING FROM TOP OF VALVE TO FINISH GRADE.
8. AFTER PIPING IS INSTALLED AND PRIOR TO INSTALLING OUTLETS AND BACKFILLING, OPEN VALVES AND FLUSH SYSTEM WITH FULL HEAD OF WATER.
9. INSTALL 3 INCH SAND COVER OVER PIPING AND PROTECT PIPE FROM DISPLACEMENT.
10. PRIOR TO BACKFILLING, TEST SYSTEM FOR LEAKS FOR WHOLE SYSTEM MAINTAINING 100 PSI PRESSURE FOR ONE HOUR. SYSTEM IS ACCEPTABLE WHEN NO LEAKAGE OR LOSS OF PRESSURE OCCURS AND SYSTEM SELF DRAINS DURING TEST PERIOD.
11. ADJUST CONTROL SYSTEM TO ACHIEVE TIME CYCLES REQUIRED TO ESTABLISH NEWLY INSTALLED PLANTS.
12. ADJUST HEADS FOR FULL WATER COVERAGE OF PLANTED AREAS.
13. INSTRUCT STORE PERSONNEL IN OPERATION AND MAINTENANCE OF SYSTEM, INCLUDING ADJUSTING OF SPRINKLER HEADS. USE OPERATION AND MAINTENANCE MATERIAL AS BASIS FOR DEMONSTRATION.
14. FURNISH THE OPERATION AND MAINTENANCE MATERIALS, TWO EXTRA SPRINKLER HEADS OF EACH TYPE AND SIZE, TWO VALVE KEYS FOR MANUAL VALVES, TWO VALVE BOX KEYS, TWO KEYS FOR VALVE MARKERS, AND TWO WRENCHES FOR EACH HEAD CORE AND FOR REMOVING AND INSTALLING EACH HEAD TYPE.
15. PROVIDE ONE COMPLETE SPRING SEASON START UP AND FALL SEASON SHUT DOWN.



TYPE TWO PARKING ISLAND DETAIL		BY	DATE
SCALE: 3/16" = 1'-0"	REVISION		
	ISSUE DATE		



TYPE THREE PARKING ISLAND DETAIL		BY	DATE
SCALE: 3/16" = 1'-0"	REVISION		
	ISSUE DATE		

REVISIONS	DATE	DRAWN BY

**PRELIMINARY
NOT FOR CONSTRUCTION**

**PLANTING
DETAILS**

DRAWN BY RAH	DATE 03/09/2022
SCALE SEE DETAIL	JOB 007.081
SHEET	

C5.2

LOCATION
WAUKEE EXPANSION
1005 W. HICKMAN ROAD

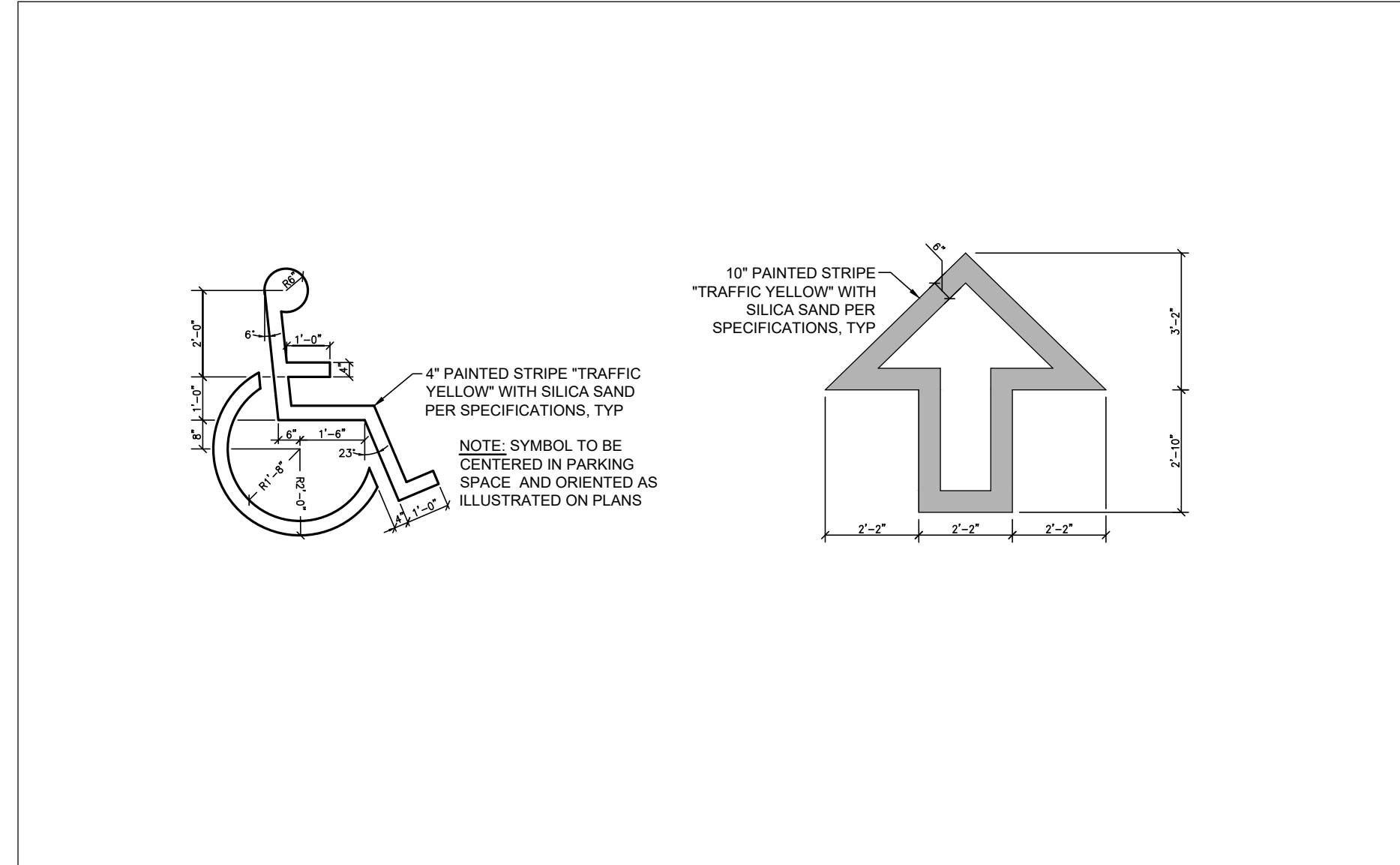
REVISIONS	DATE

CONSTRUCTION DETAILS

DRAWN BY RAH	DATE 03/03/2022
SCALE SEE DETAIL	JOB 007.081
SHEET	

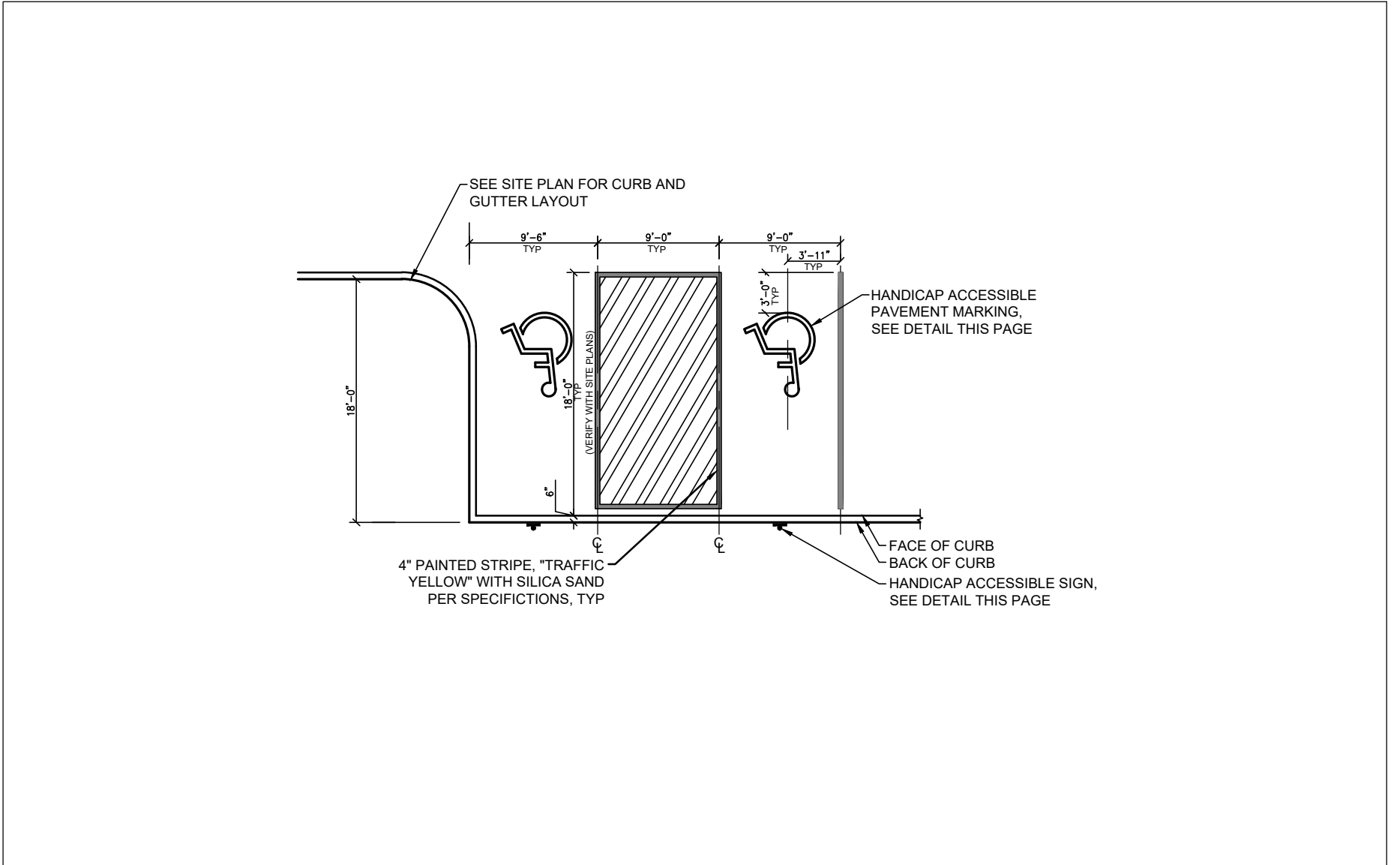
C6.0

**PRELIMINARY
NOT FOR CONSTRUCTION**



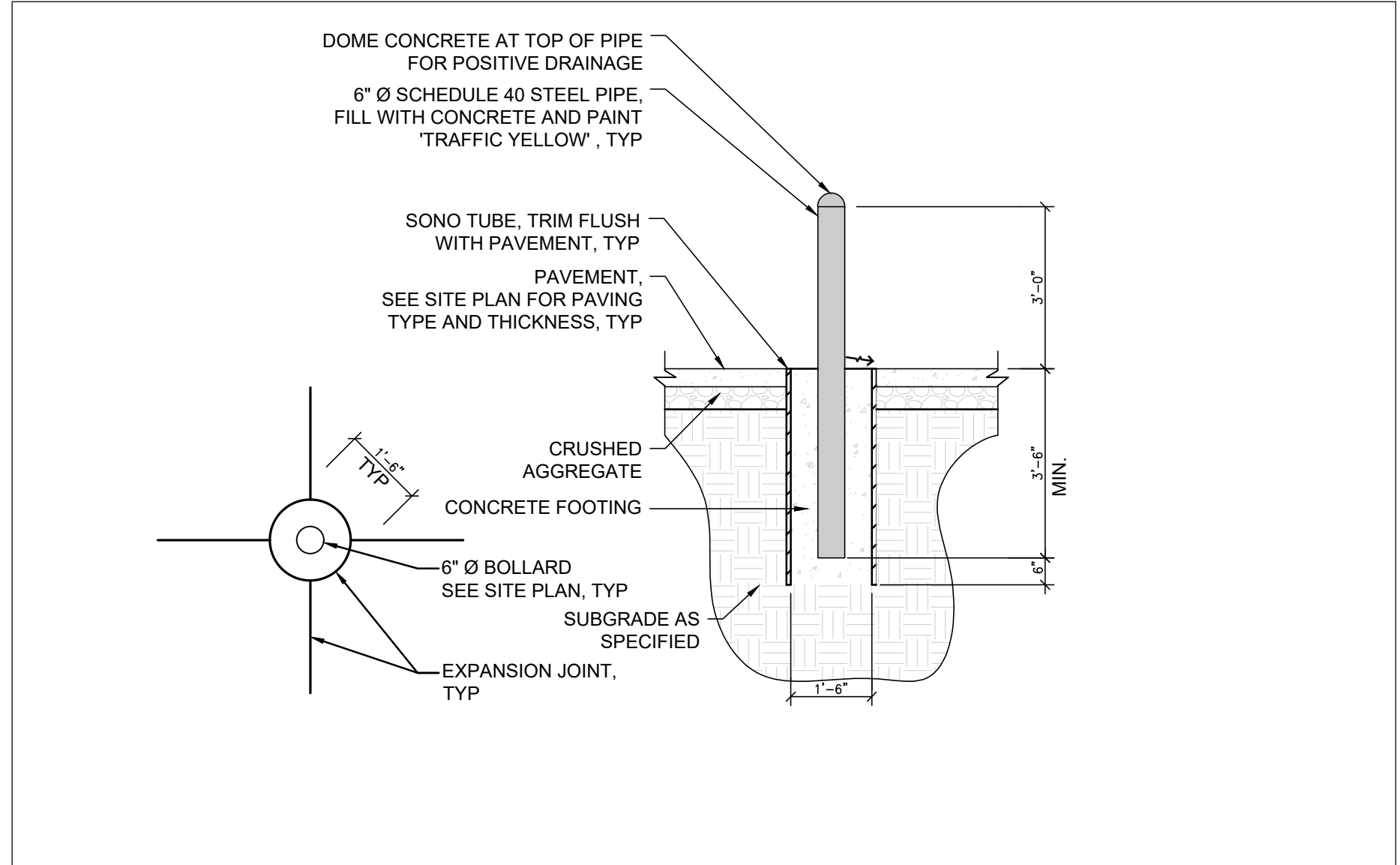
HANDICAP PAVEMENT MARKING AND DIRECTIONAL ARROW

SCALE:	REVISION	BY	DATE



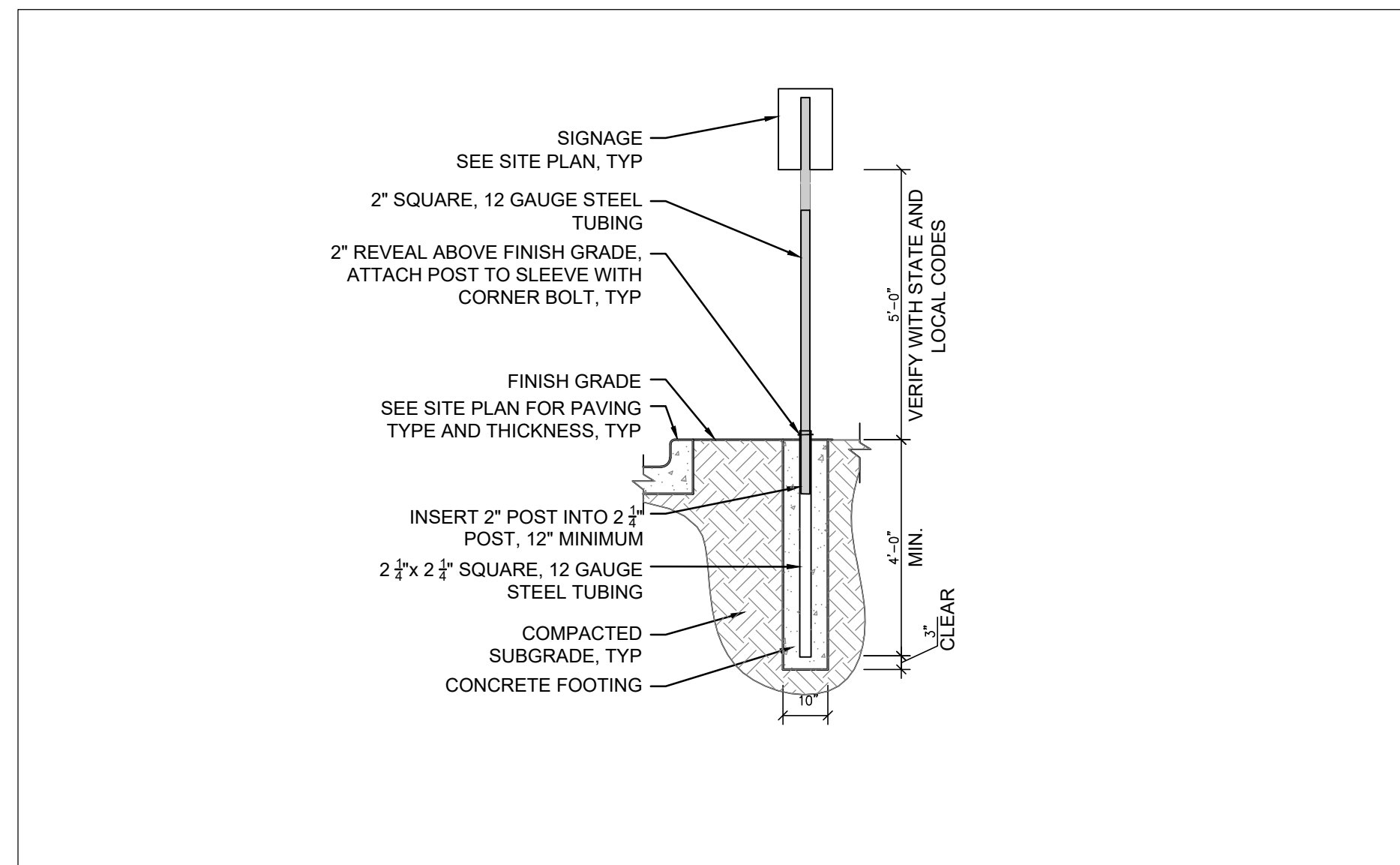
HANDICAP PARKING AND PERPENDICULAR PAVEMENT STRIPING

SCALE:	REVISION	BY	DATE



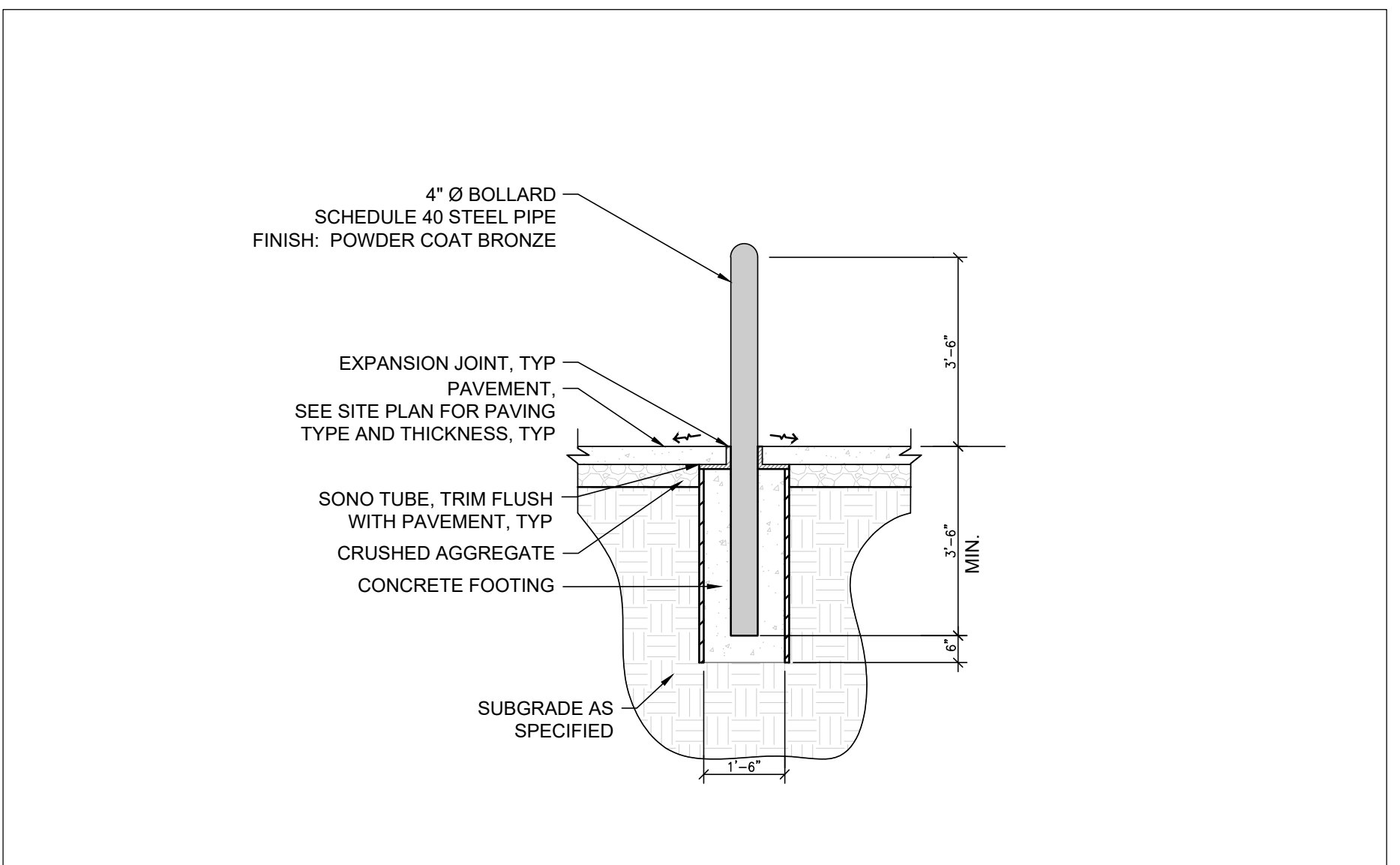
TYPE 6Y BOLLARD

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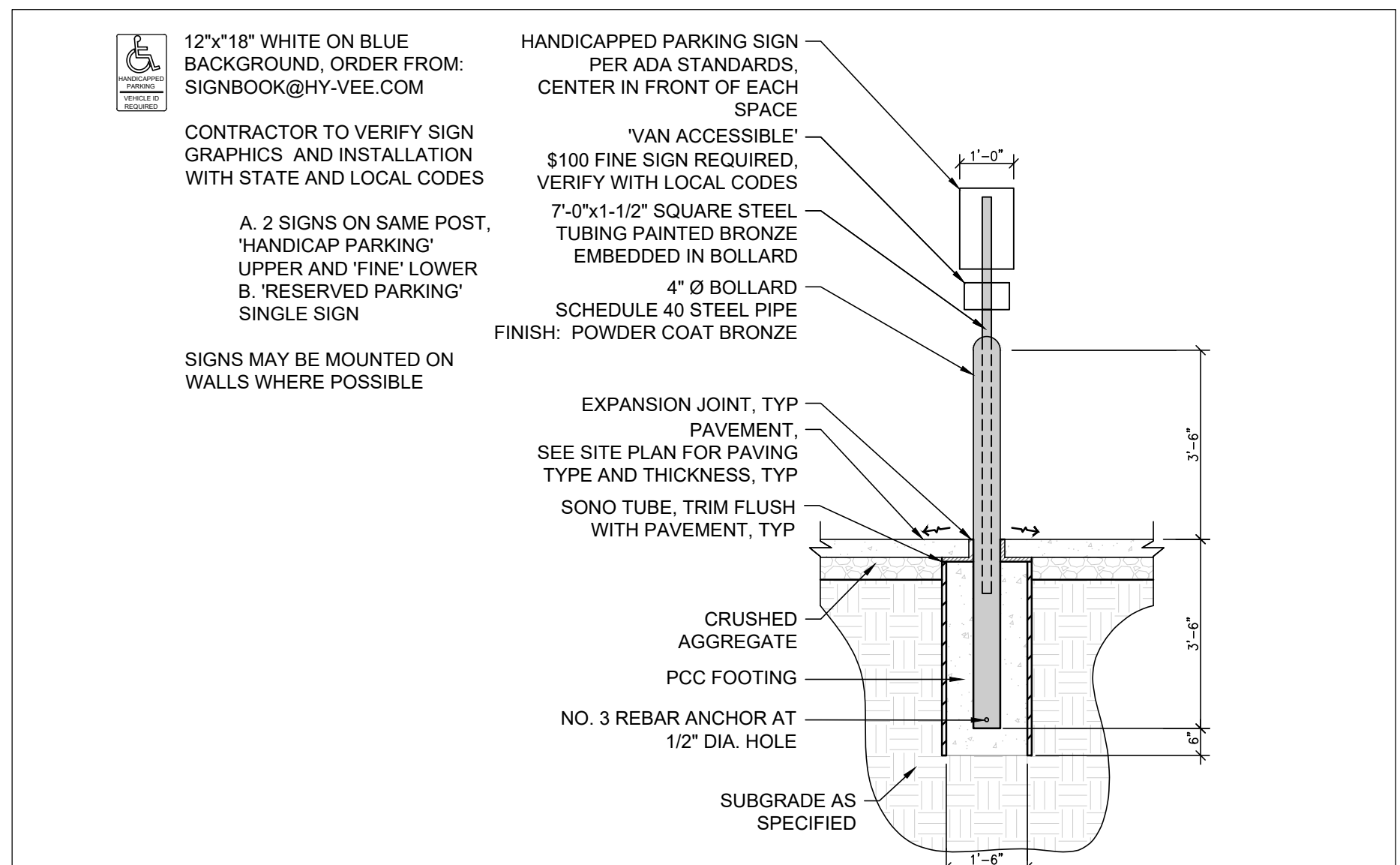
PARKING ISLAND SIGN INSTALLATION

SCALE:	REVISION	BY	DATE



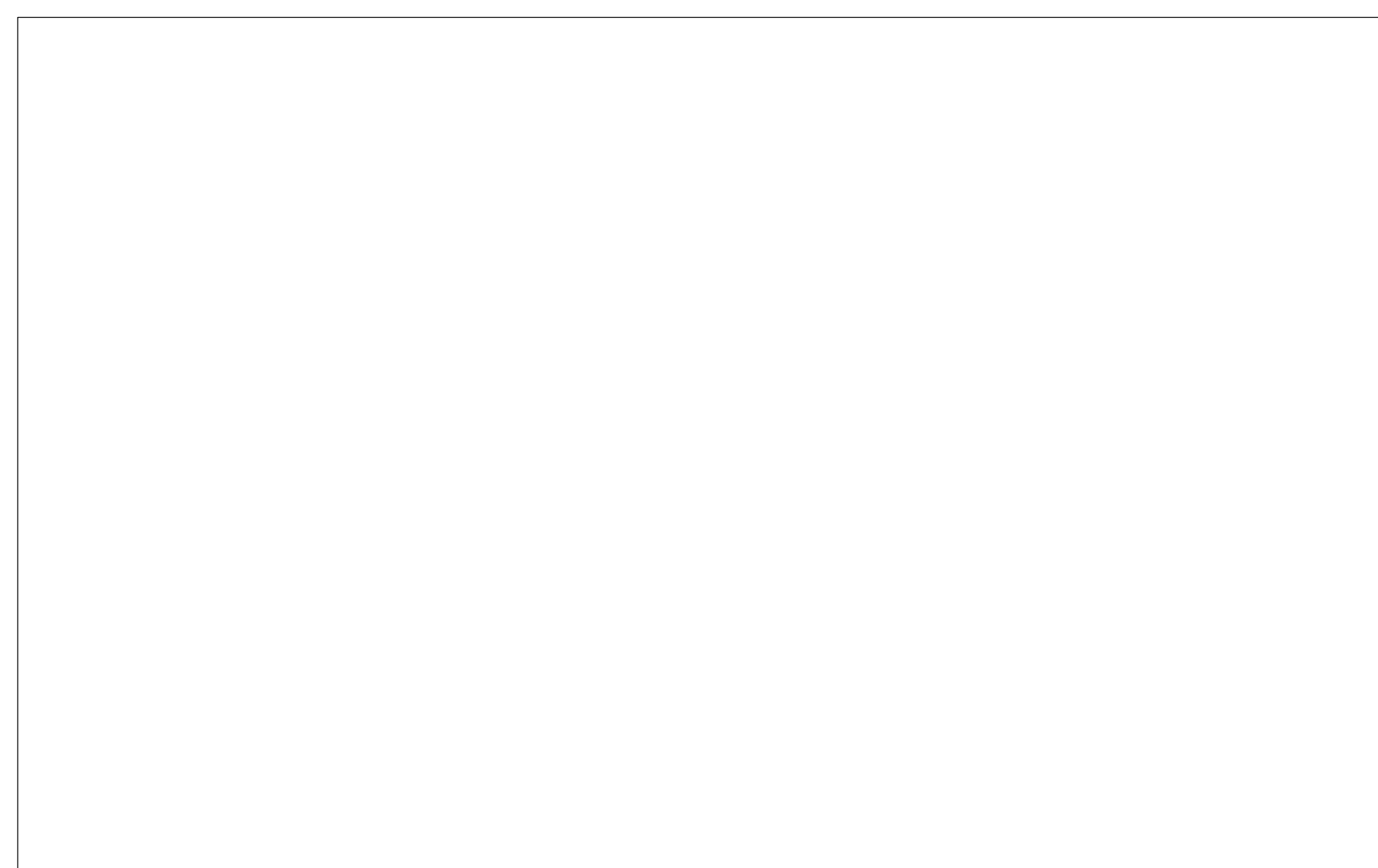
TYPE 4B BOLLARD

SCALE:	REVISION	BY	DATE



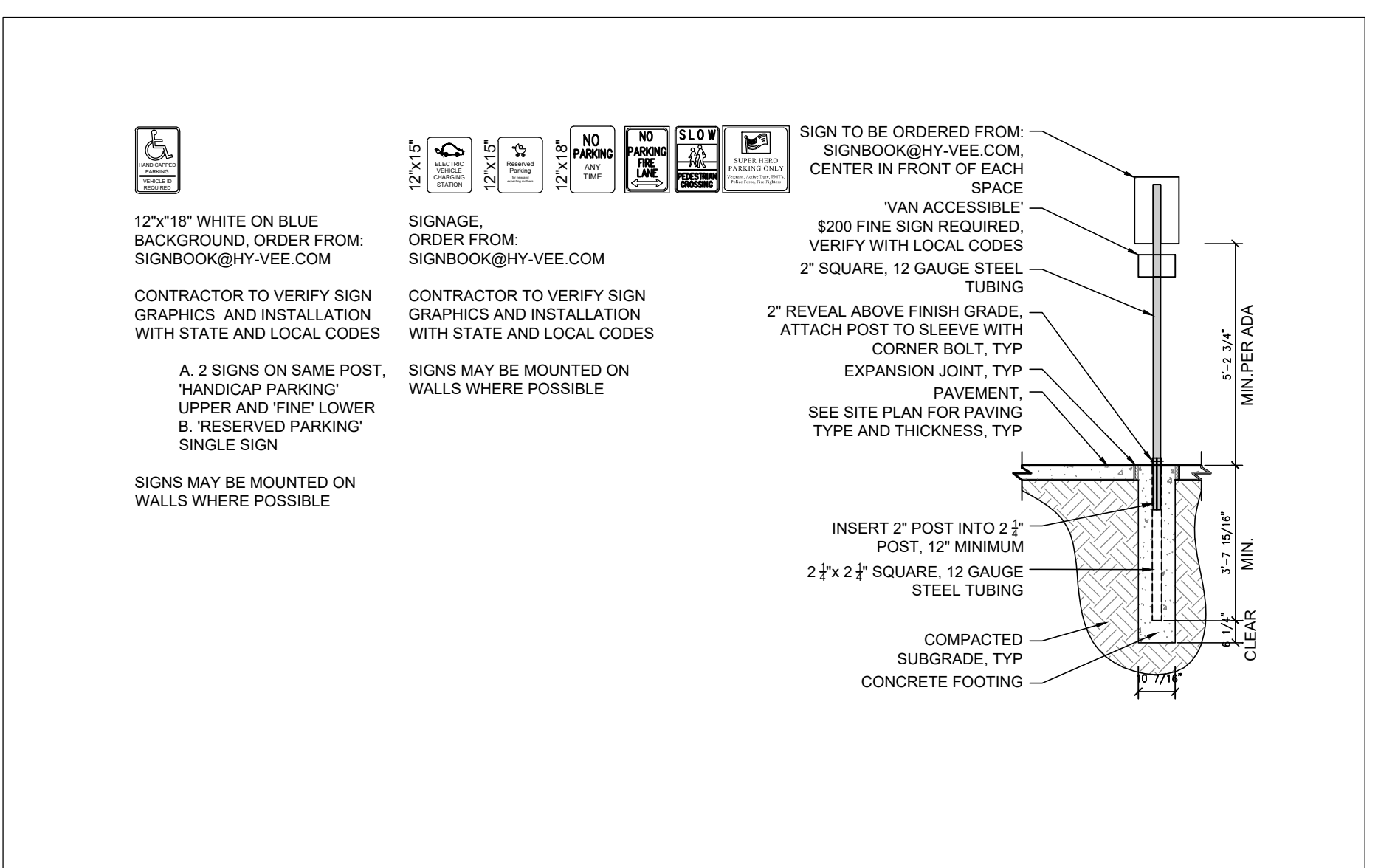
TYPE 4B HC BOLLARD

SCALE:	REVISION	BY	DATE



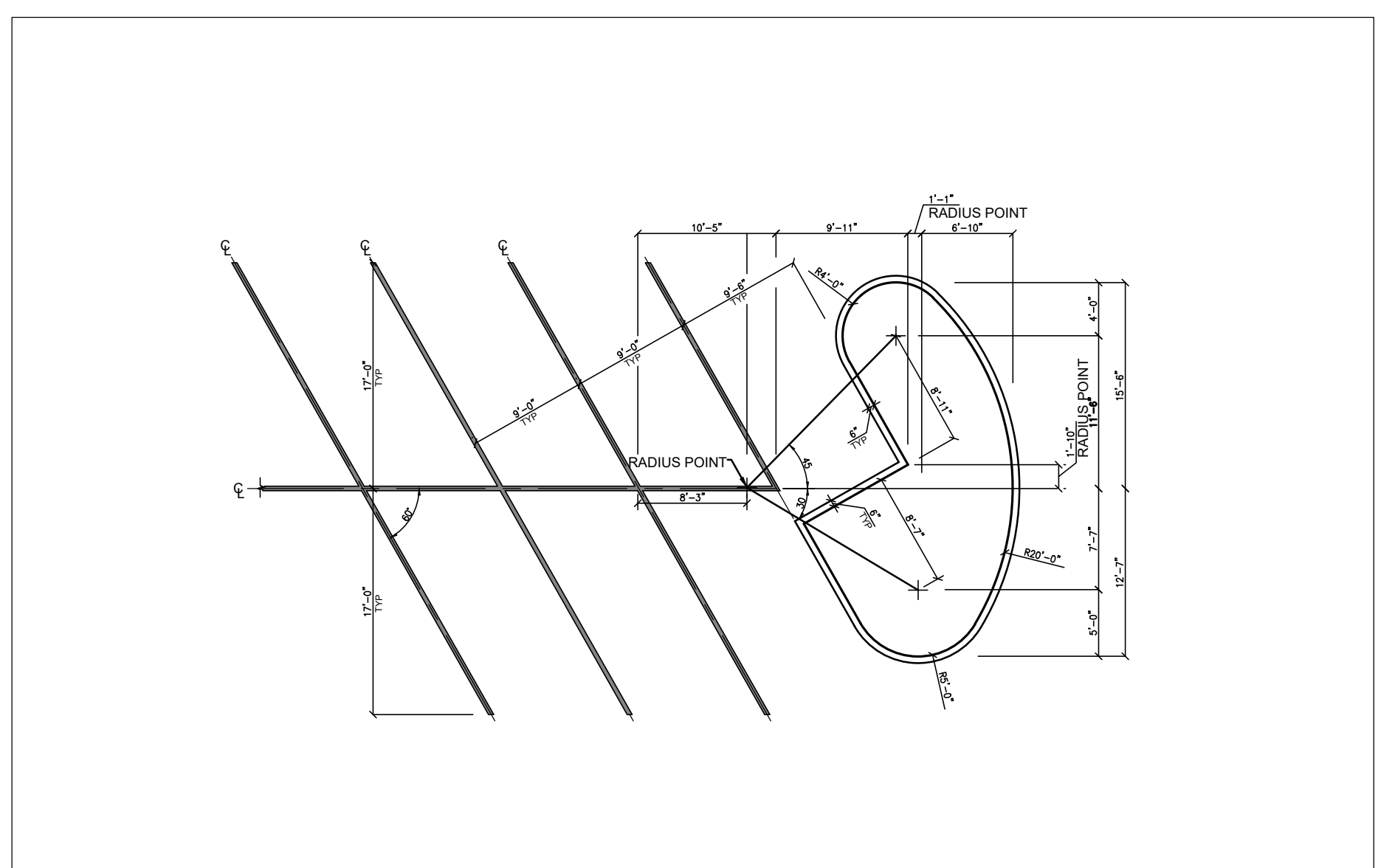
DETAIL NOT USED

SCALE:	REVISION	BY	DATE



PARKING LOT SIGN INSTALLATION

SCALE:	REVISION	BY	DATE



DIAGONAL PARKING AND PCC ISLAND DETAIL

SCALE:	REVISION	BY	DATE

LOCATION
WAUKEE EXPANSION
1005 W. HICKMAN ROAD

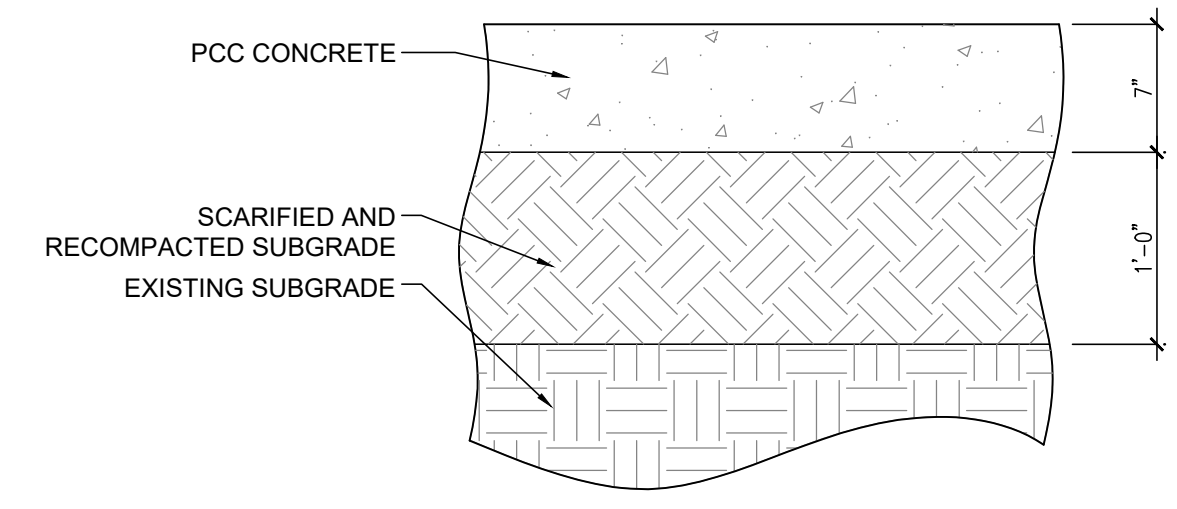
REVISIONS	DATE

CONSTRUCTION
DETAILS

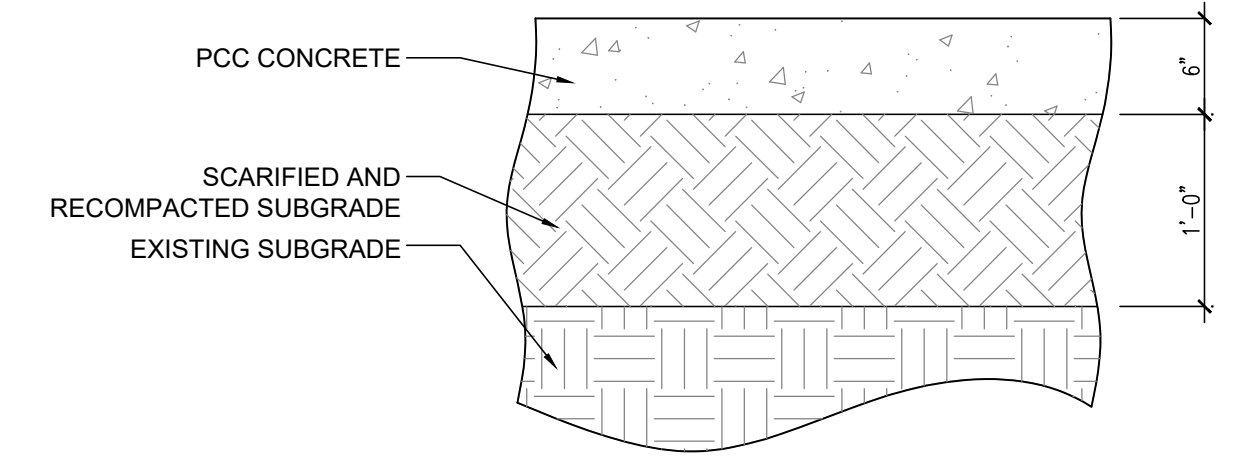
DRAWN BY RAH	DATE 03/09/2022
SCALE SEE DETAIL	JOB 007.081
SHEET	

C6.1

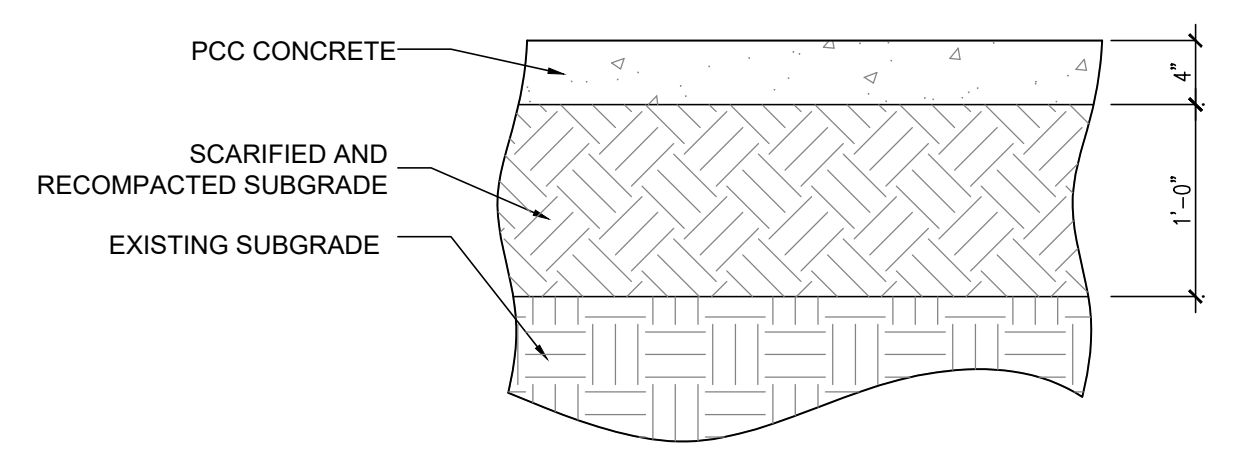
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NOT FOR CONSTRUCTION**



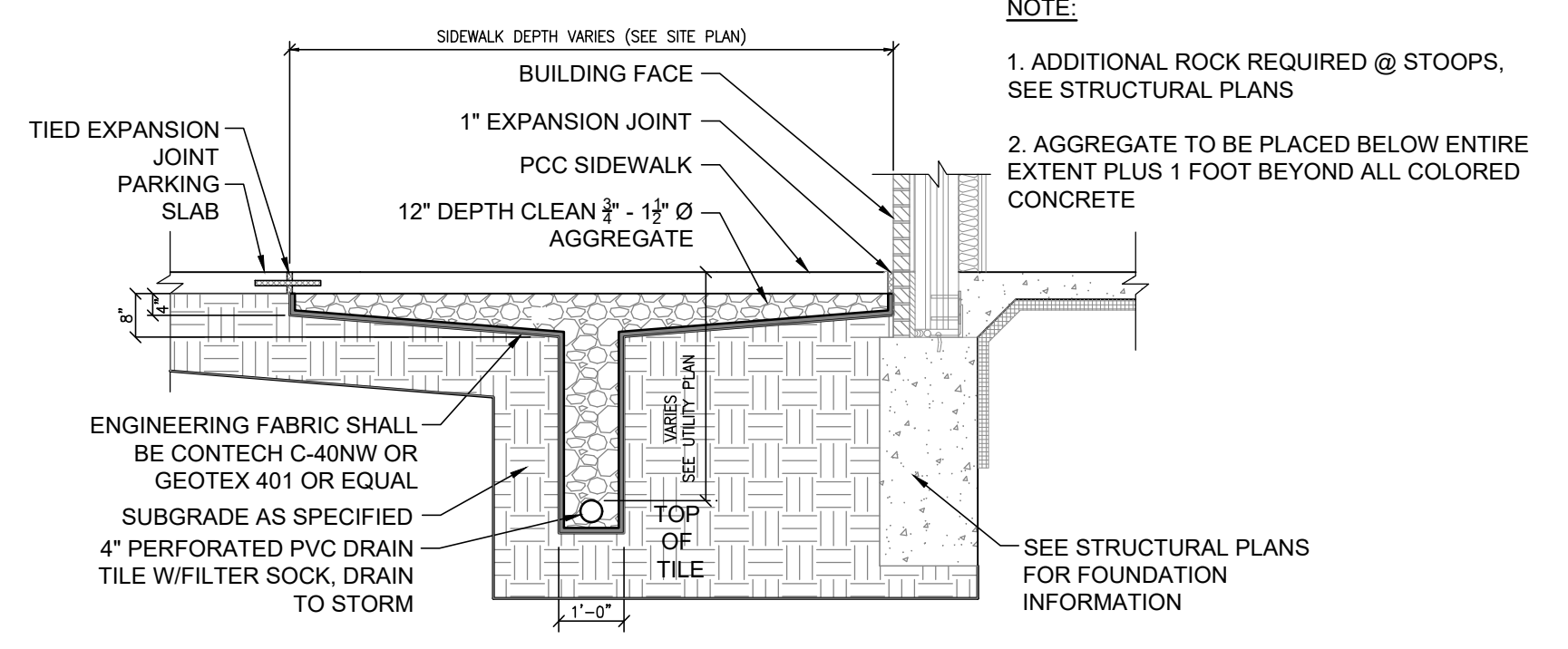
7" CONCRETE PAVING SECTION, TYP
SCALE: 1" = 1'-0"
REVISION
ISSUE DATE
BY DATE



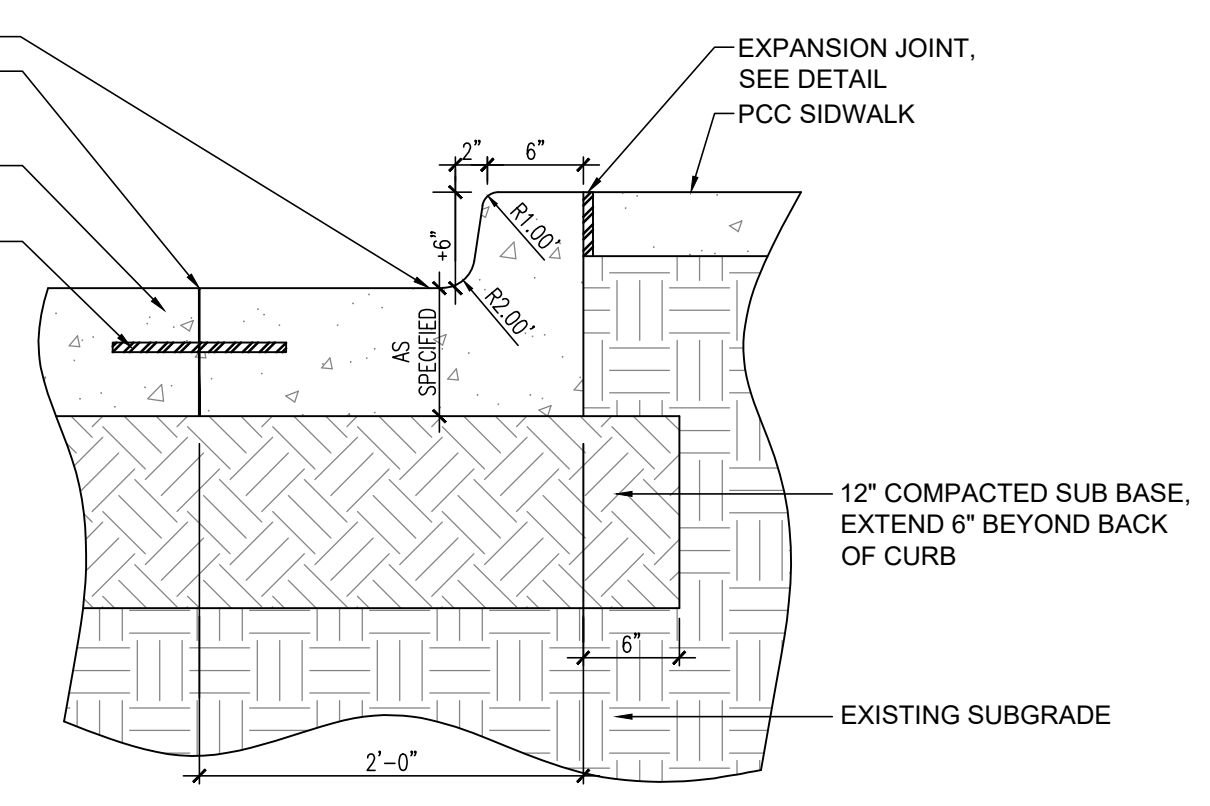
6" CONCRETE PAVING SECTION, TYP
SCALE: NTS
REVISION
ISSUE DATE
BY DATE



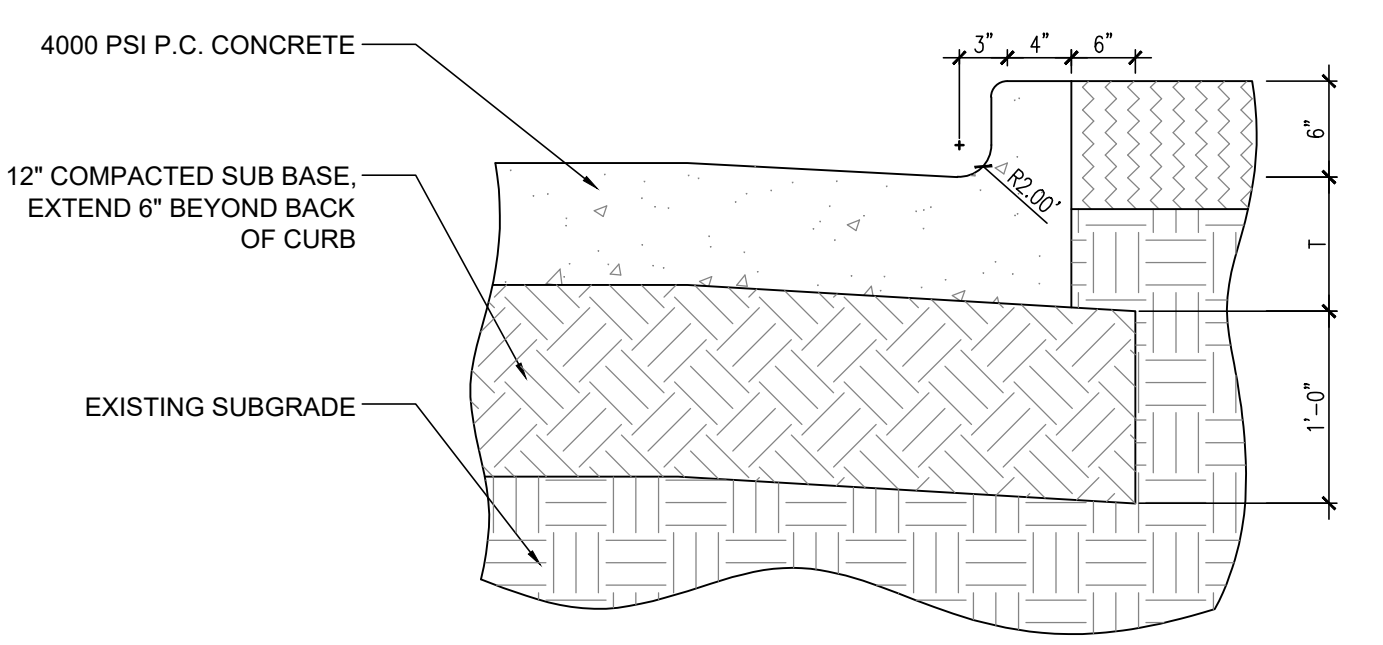
SIDEWALK CONCRETE PAVING SECTION, TYP
SCALE: NTS
REVISION
ISSUE DATE
BY DATE



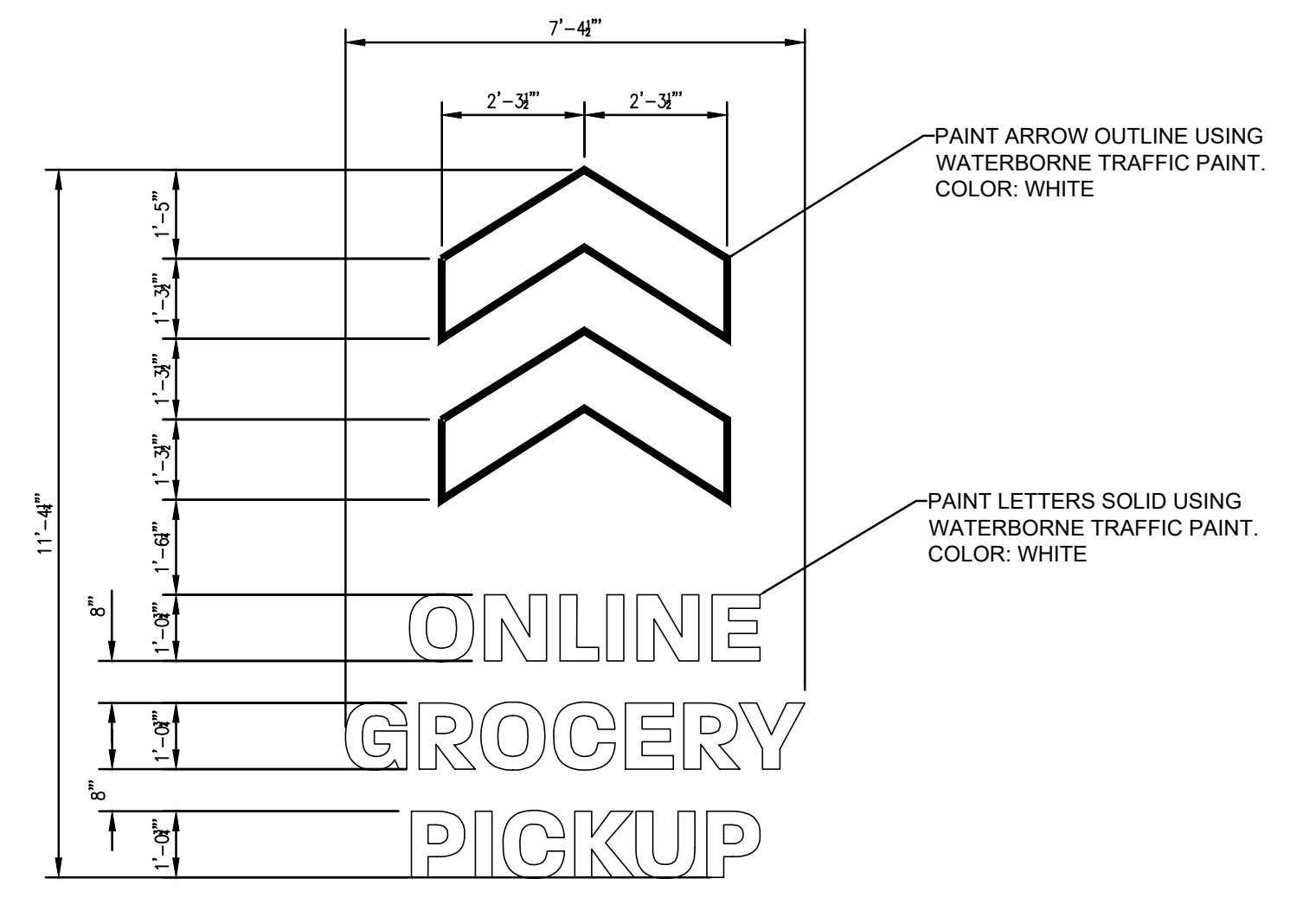
PCC FRONT SIDEWALK CROSS SECTION, TYP
SCALE: 3/8" = 1'-0"
REVISION
ISSUE DATE
BY DATE



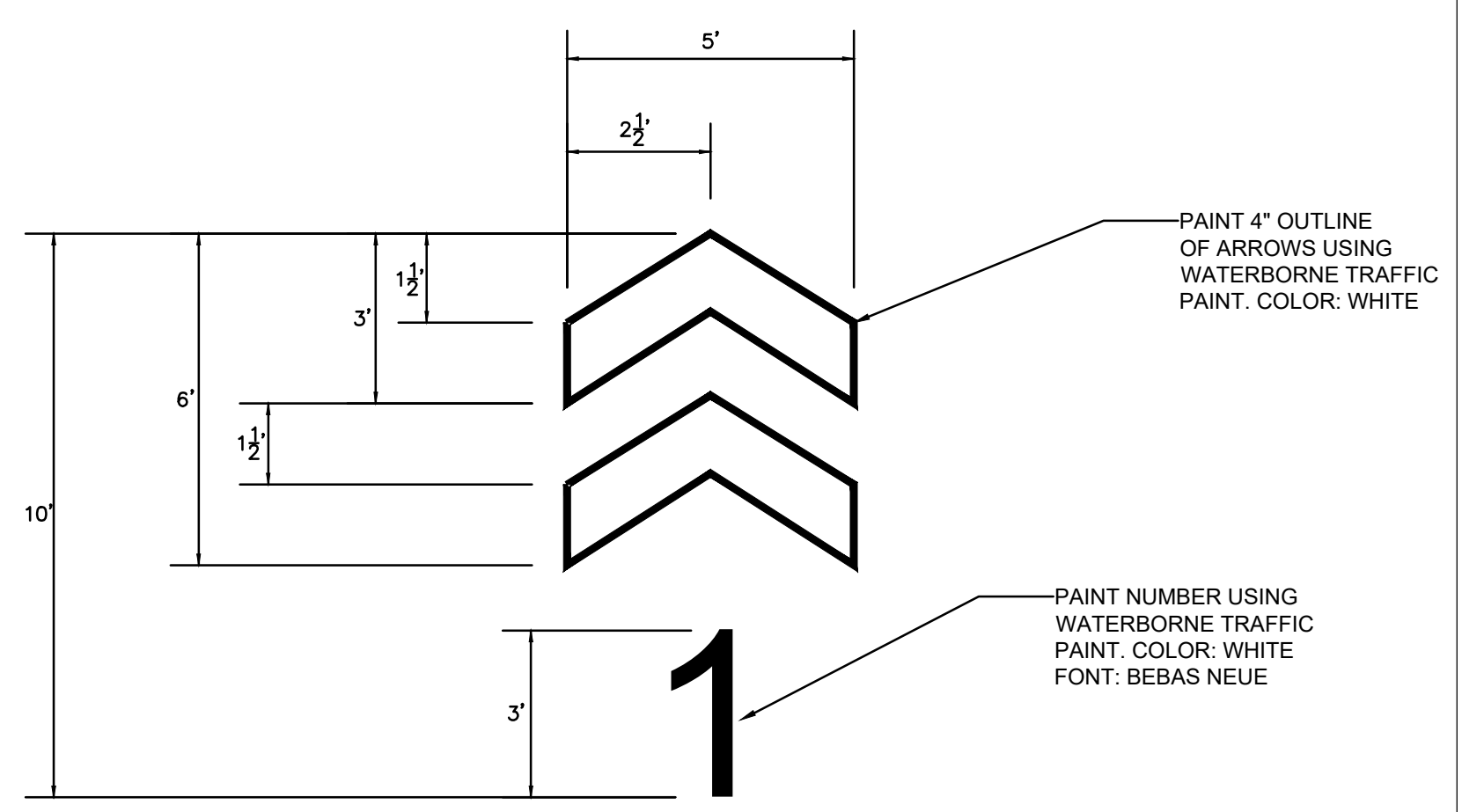
PCC CURB AND GUTTER
SCALE: 1" = 1'-0"
REVISION
ISSUE DATE
BY DATE



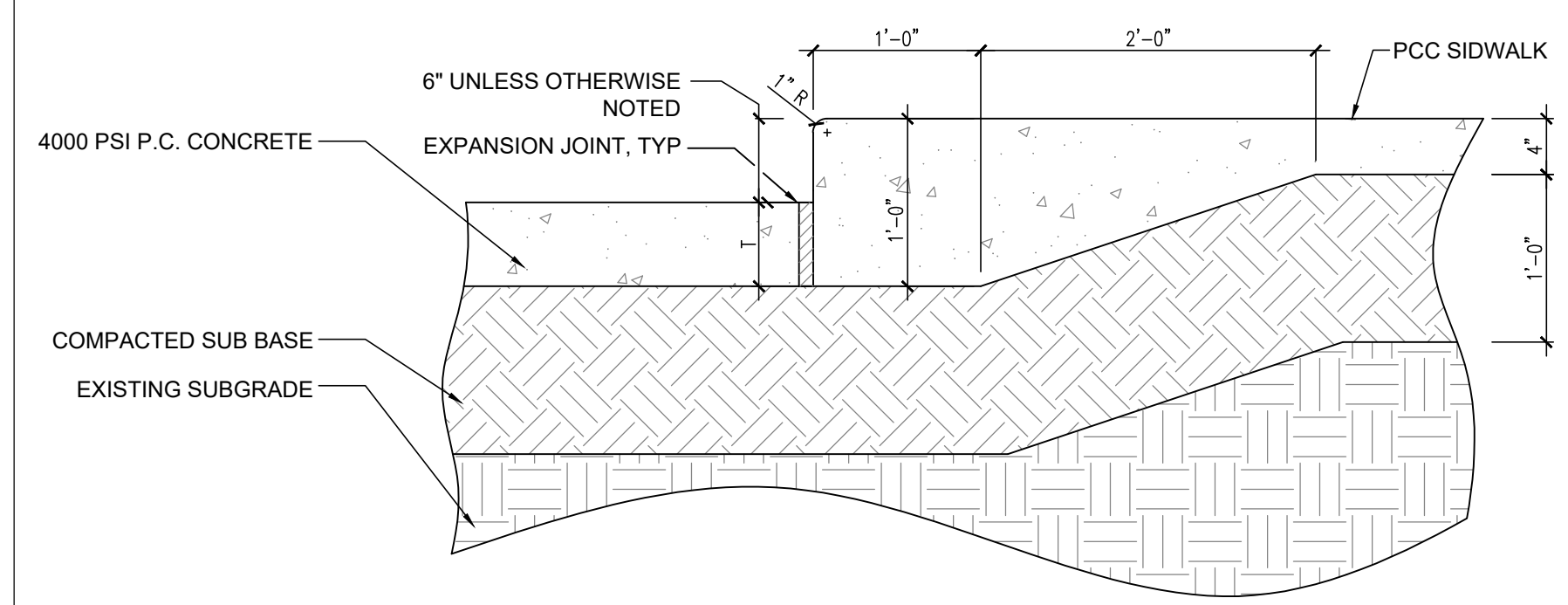
INTEGRAL CURB AND GUTTER
SCALE: 1" = 1'-0"
REVISION
ISSUE DATE
BY DATE



AISLES ONLINE GROCERY PICKUP MARKING DETAIL
SCALE: 3/8" = 1'-0"
REVISION
ISSUE DATE
BY DATE

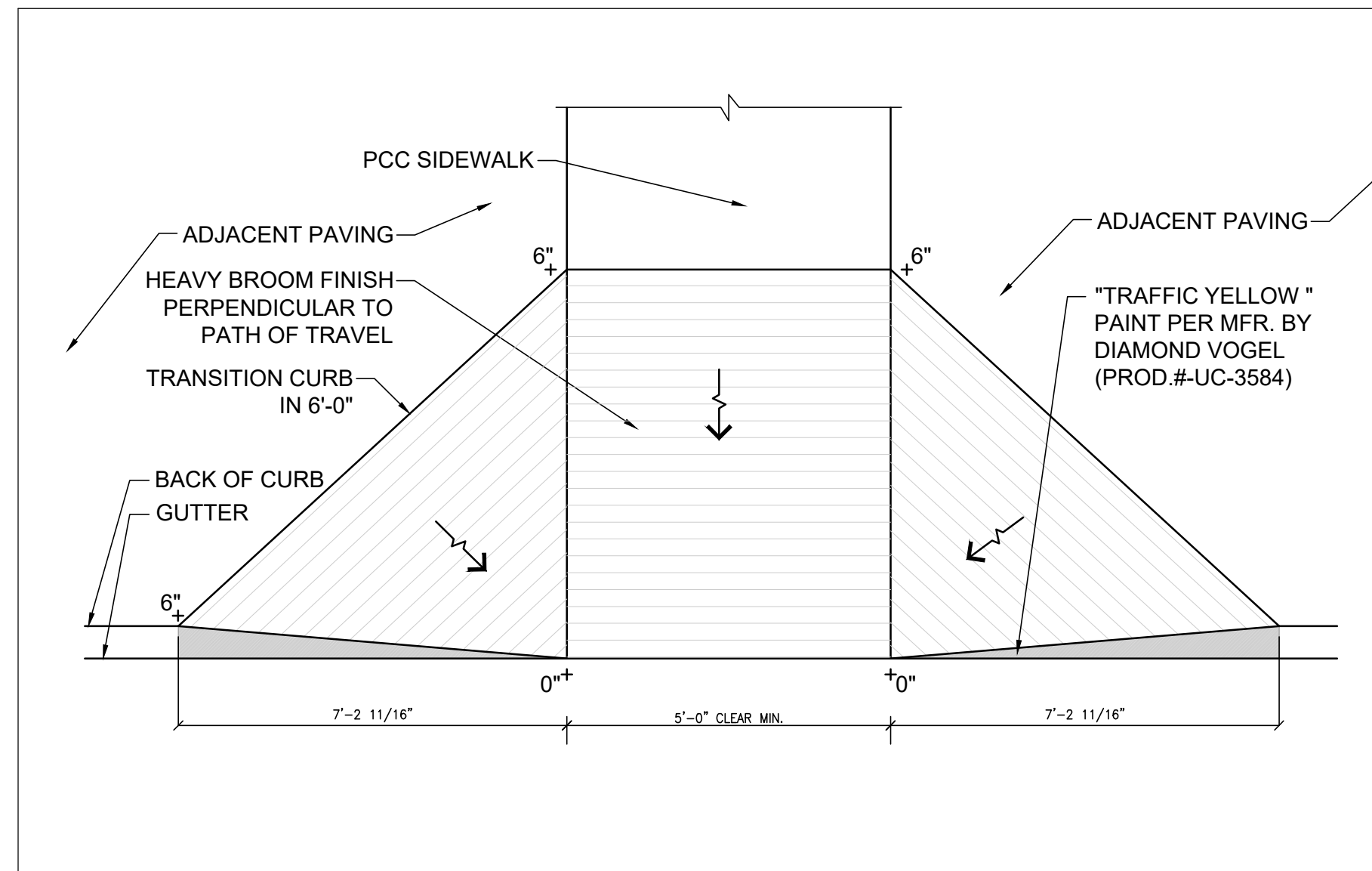


LANE MARKING DETAIL
SCALE: 3/8" = 1'-0"
REVISION
ISSUE DATE
BY DATE

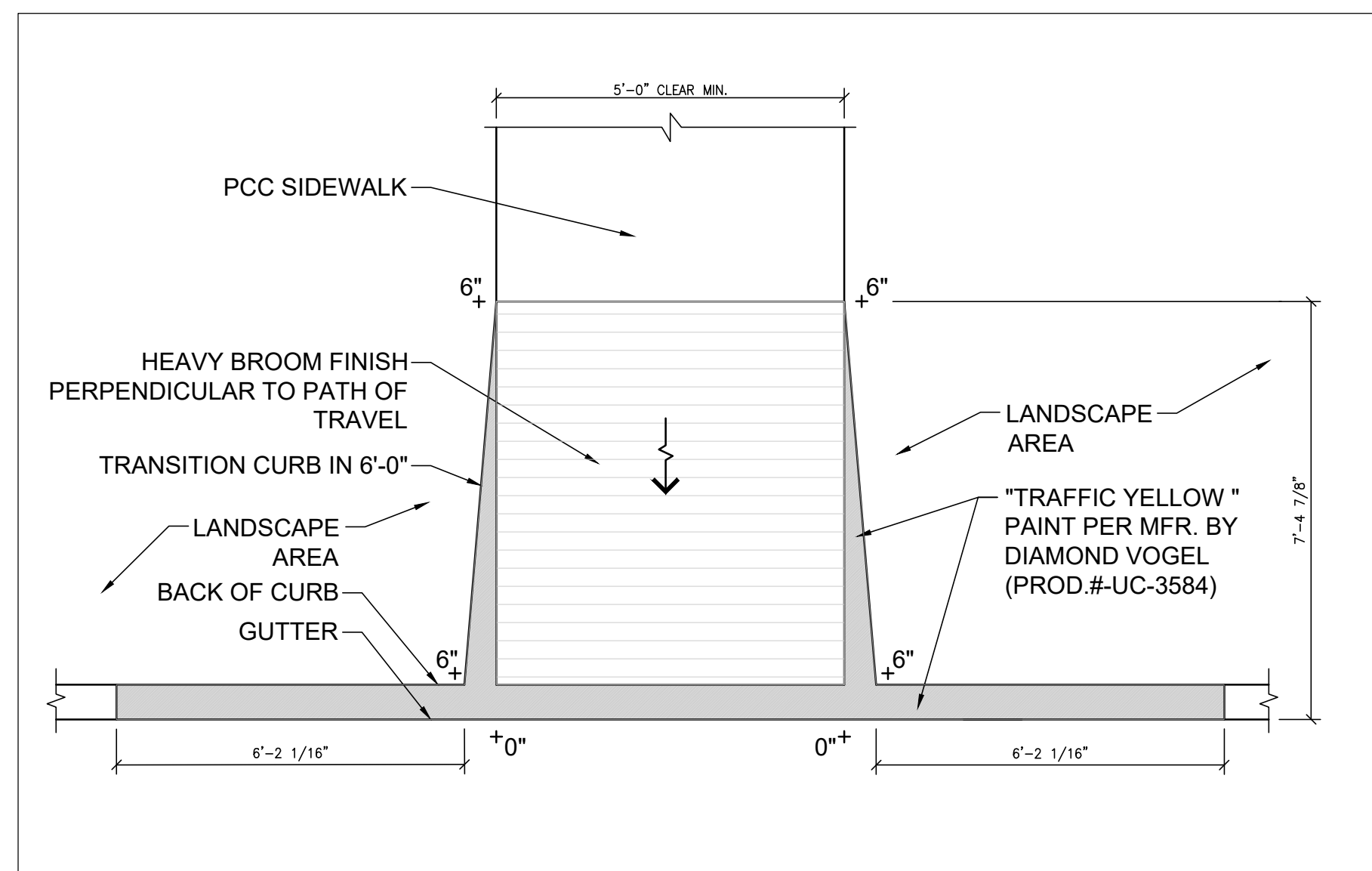


INTEGRAL SIDEWALK AND GUTTER - PCC
SCALE: 1" = 1'-0"
REVISION
ISSUE DATE
BY DATE

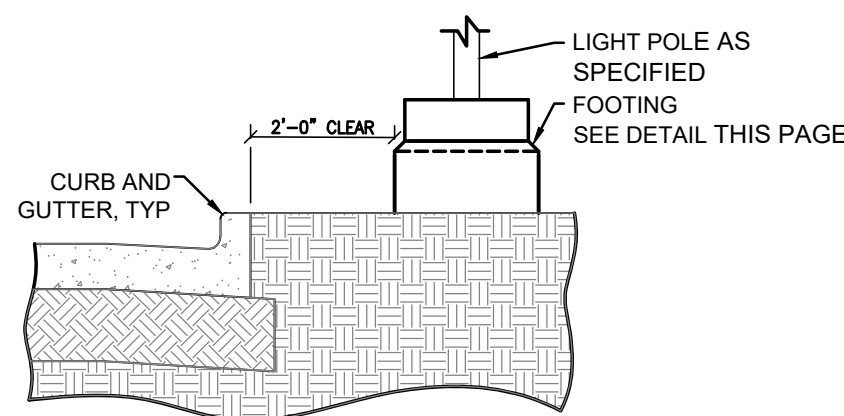
**PRELIMINARY
NOT FOR CONSTRUCTION**



SCALE: NTS		REVISION		BY	DATE
			ISSUE DATE		

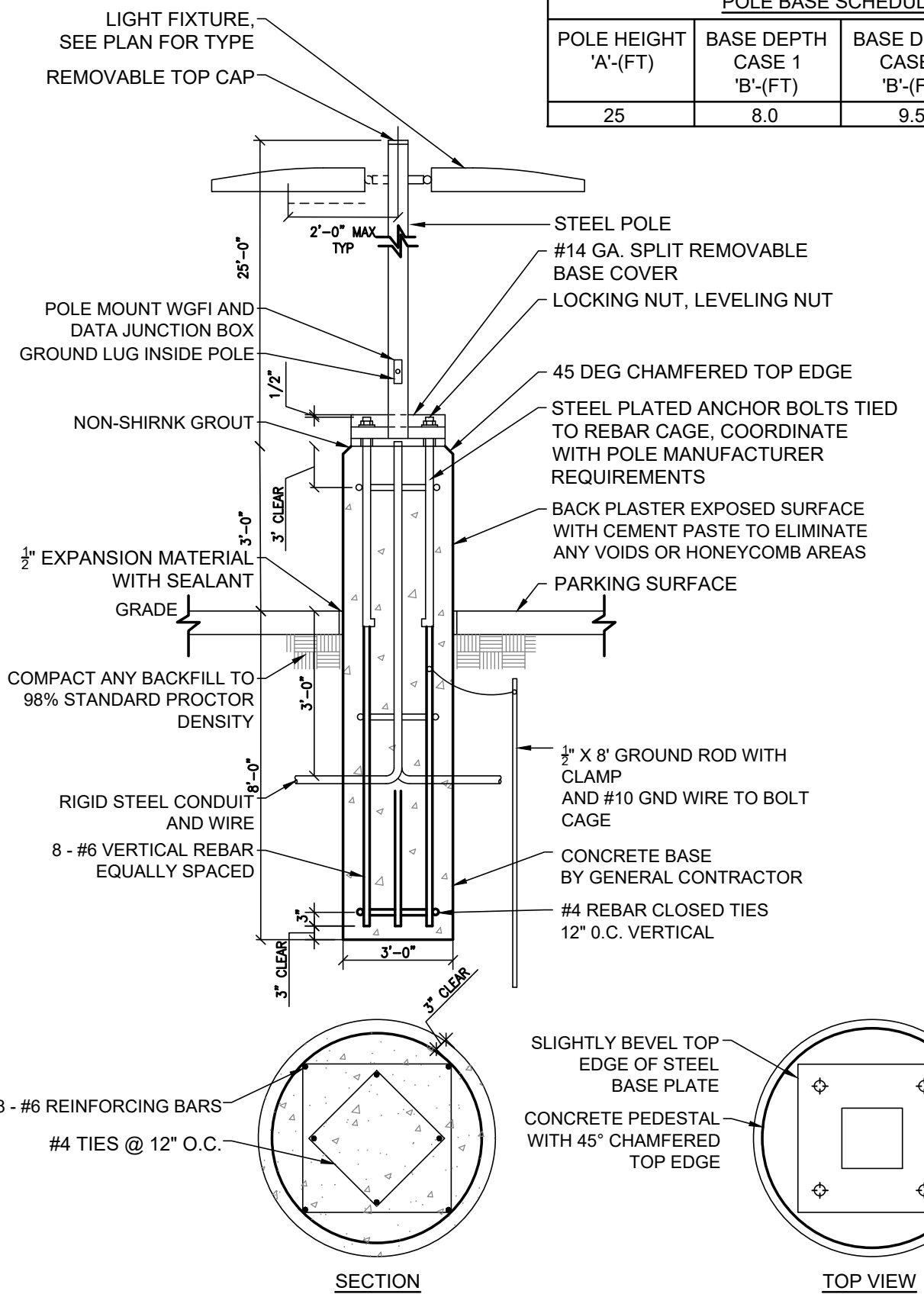


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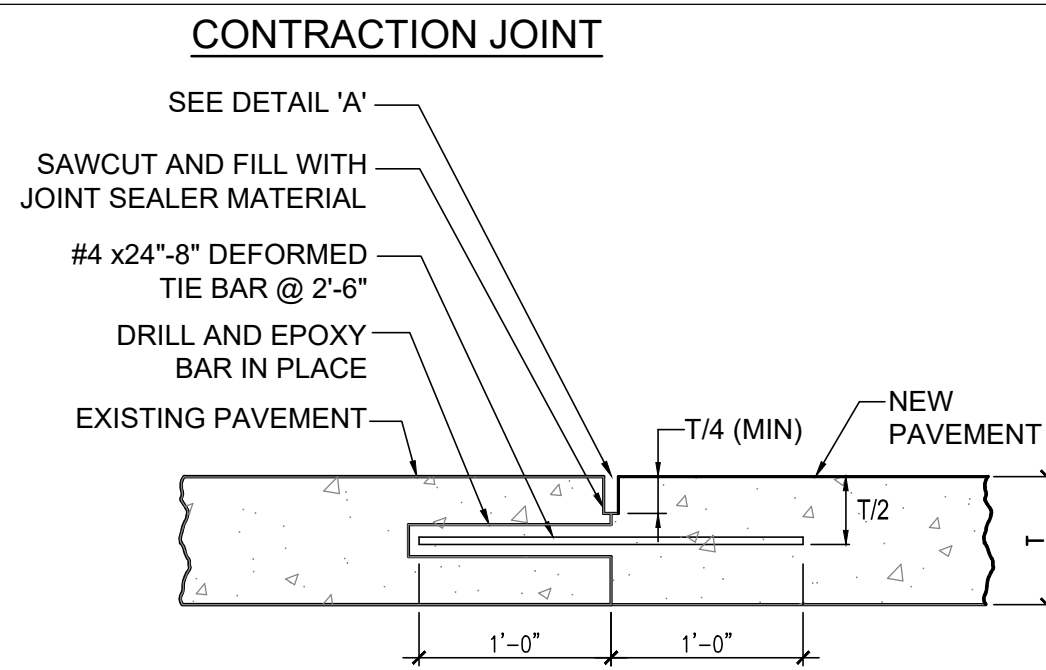


SCALE: 3/8" = 1'-0"		REVISION		BY	DATE
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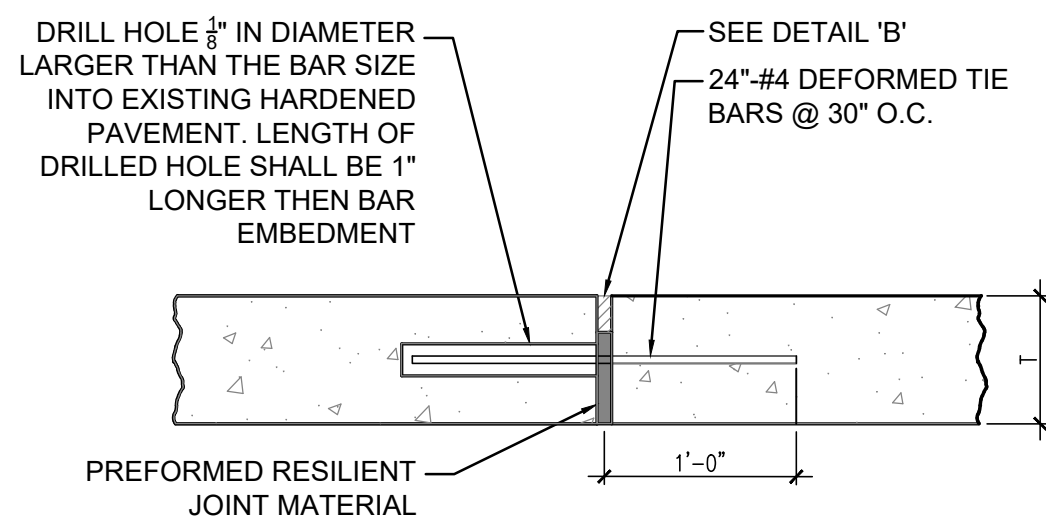
POLE BASE SCHEDULE			
POLE HEIGHT 'A'-(FT)	BASE DEPTH CASE 1 'B'-(FT)	BASE DEPTH CASE 2 'B'-(FT)	BASE DEPTH CASE 3 'B'-(FT)
25	8.0	9.5	10.5



SCALE: 1/40		REVISION		BY	DATE
			ISSUE DATE		



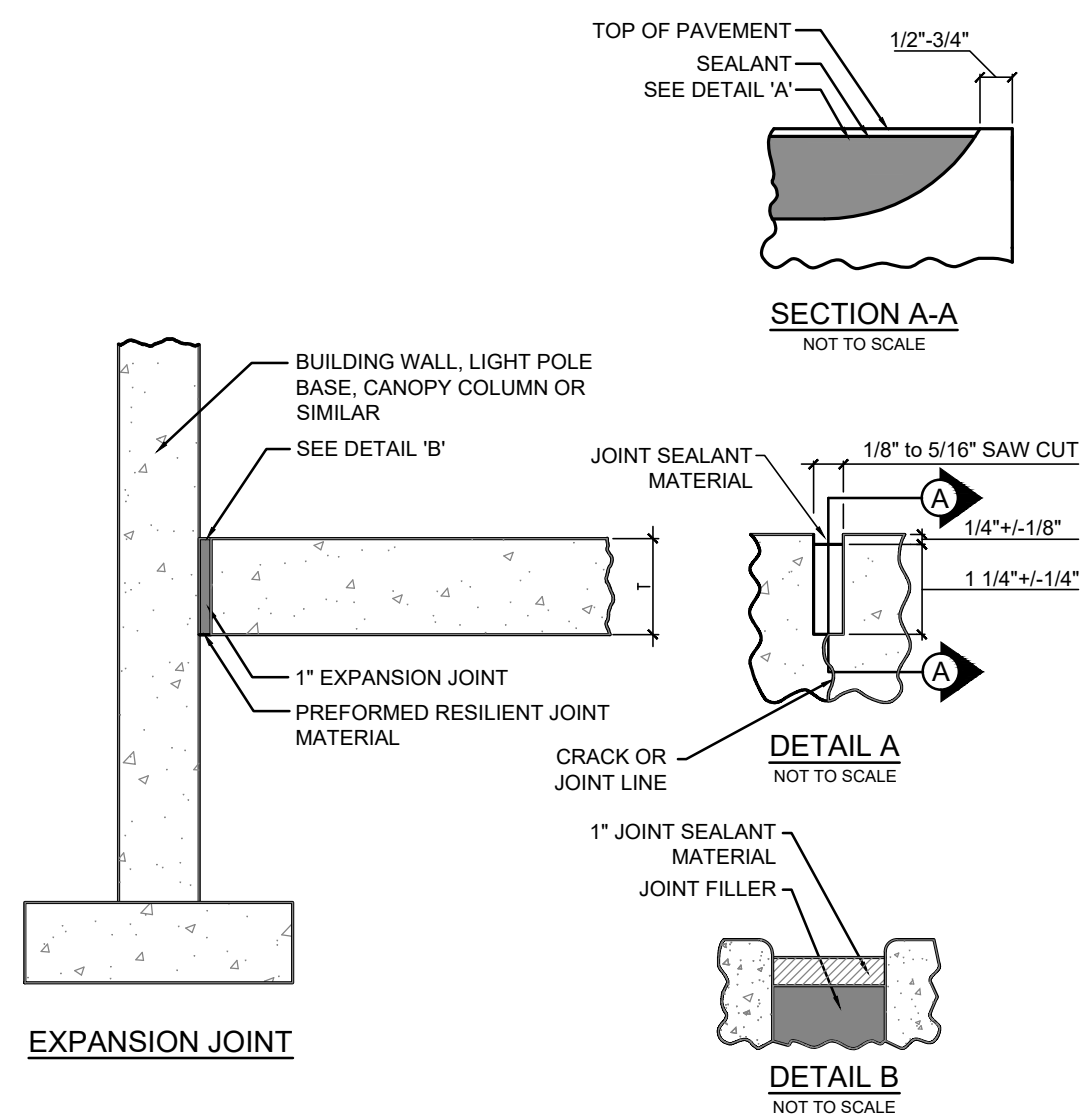
TIED CONTRACTION JOINT



TIED EXPANSION JOINT

PAVEMENT JOINT DETAILS (1 OF 2)

SCALE: 1" = 1'-0"		REVISION		BY	DATE
			ISSUE DATE		

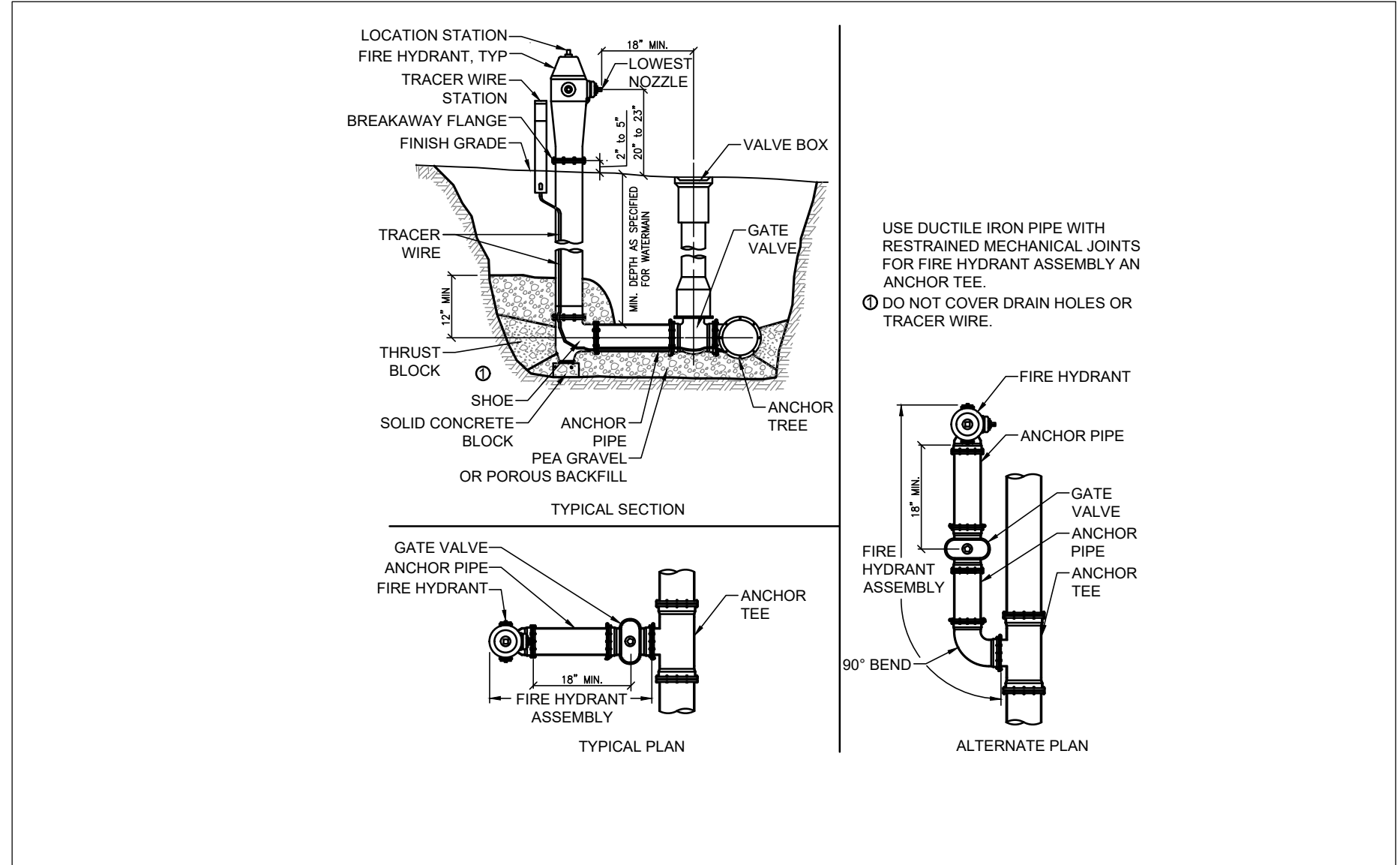


EXPANSION JOINT

PAVEMENT JOINT DETAILS (2 OF 2)

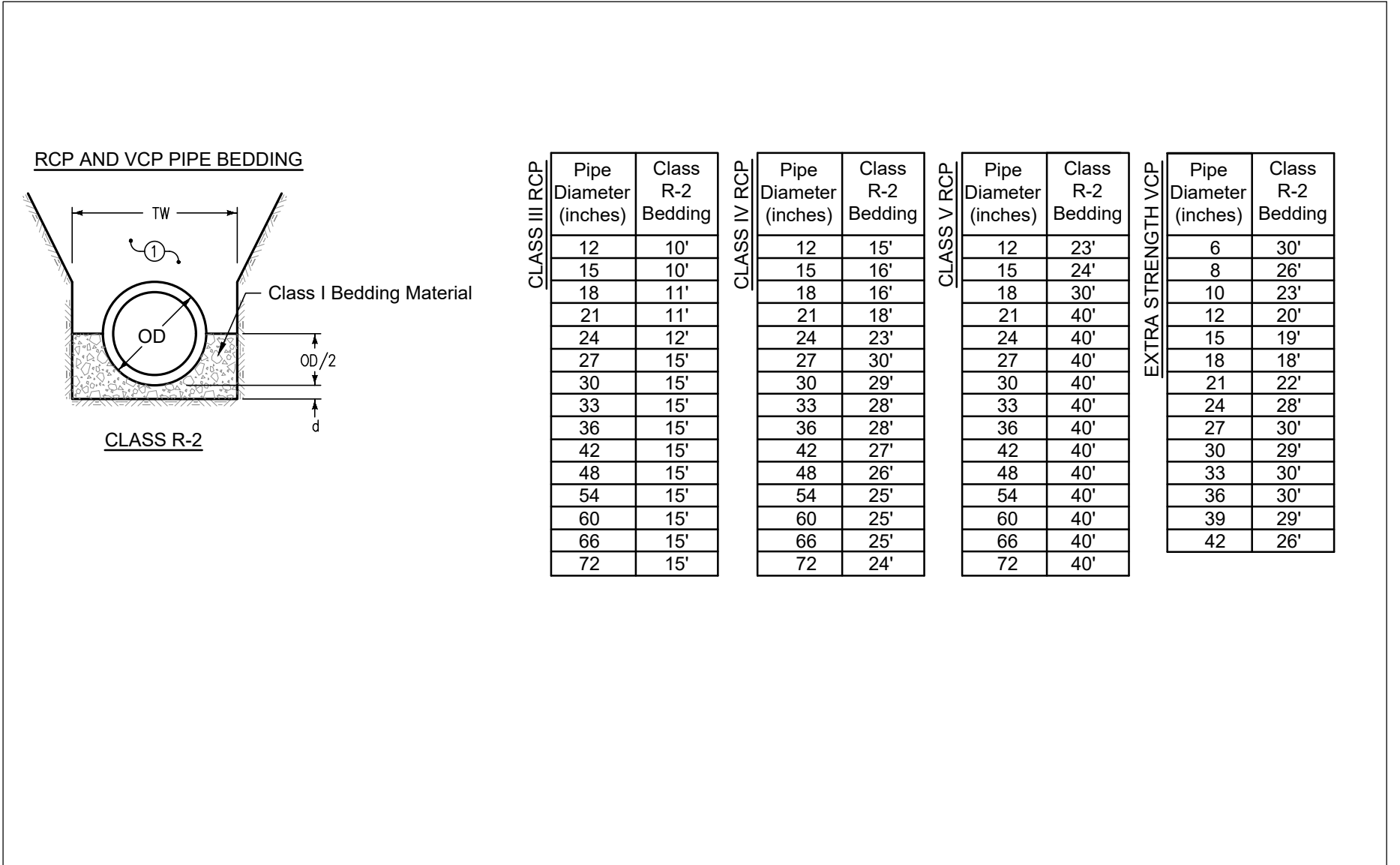
SCALE: 1/16		REVISION		BY	DATE
			ISSUE DATE		

**PRELIMINARY
NOT FOR CONSTRUCTION**



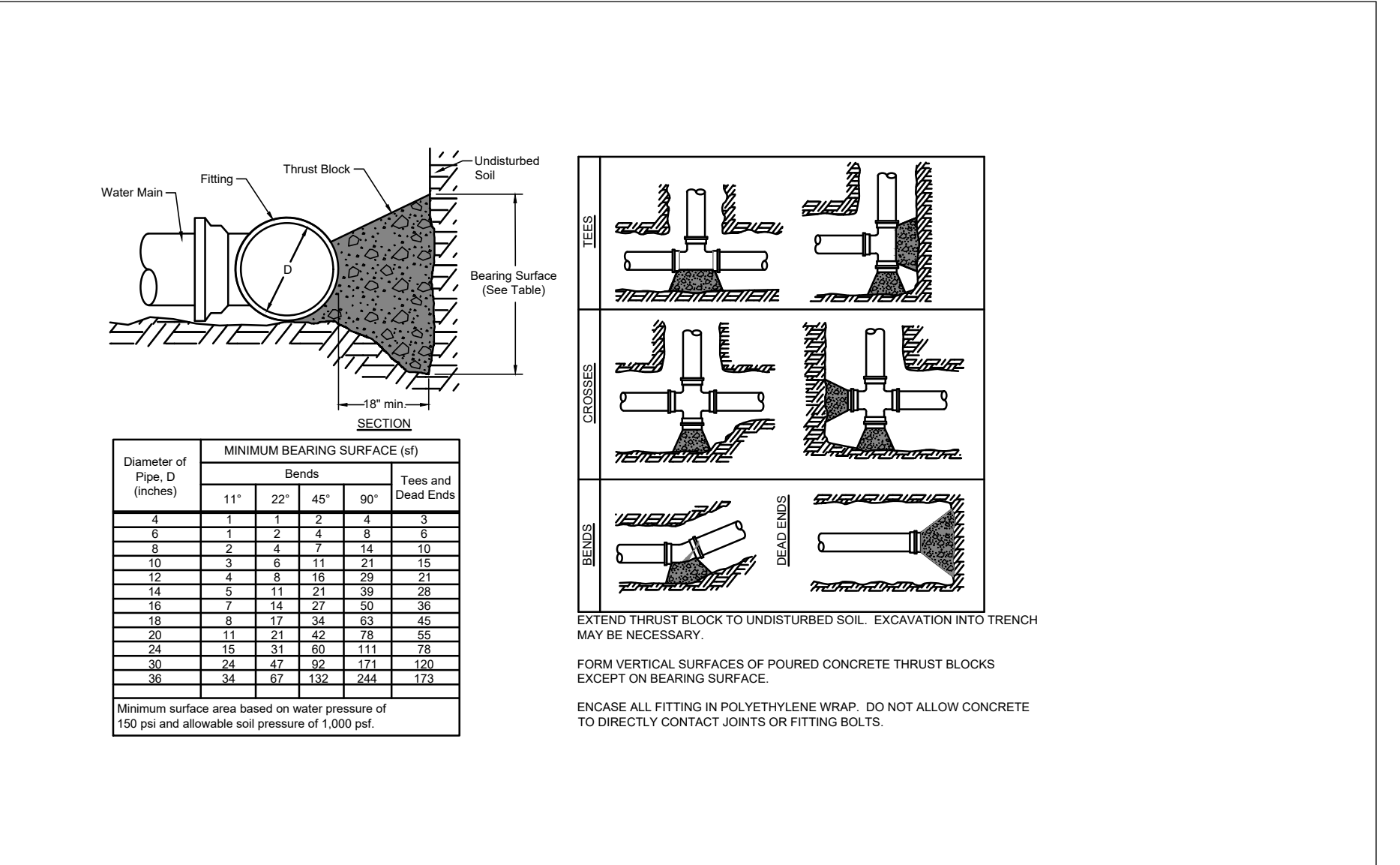
FIRE HYDRANT ASSEMBLY
SCALE: 1/40

REVISION	BY	DATE



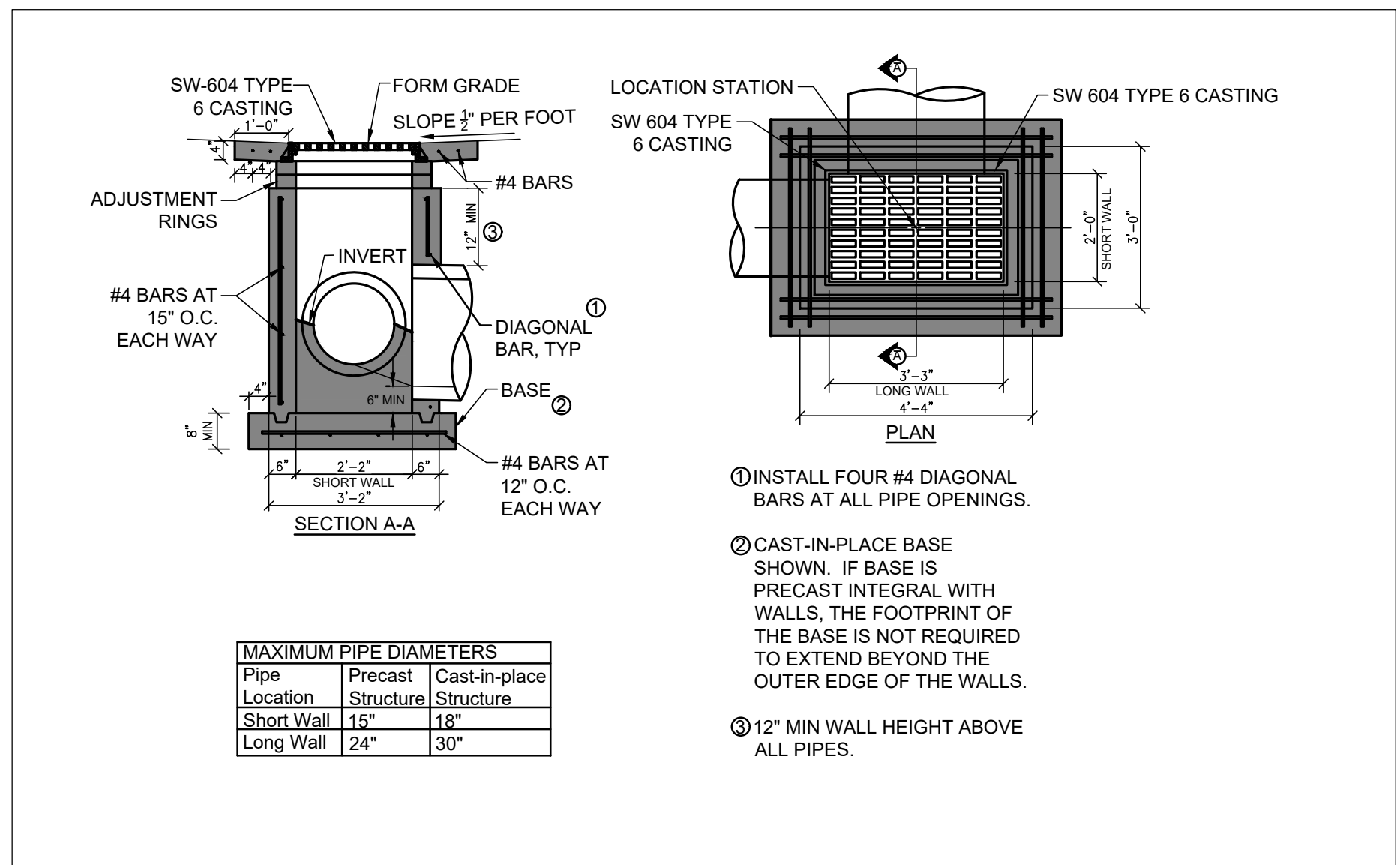
RIGID GRAVITY PIPE TRENCH BEDDING
SCALE: 3/8" = 1'-0"

REVISION	BY	DATE



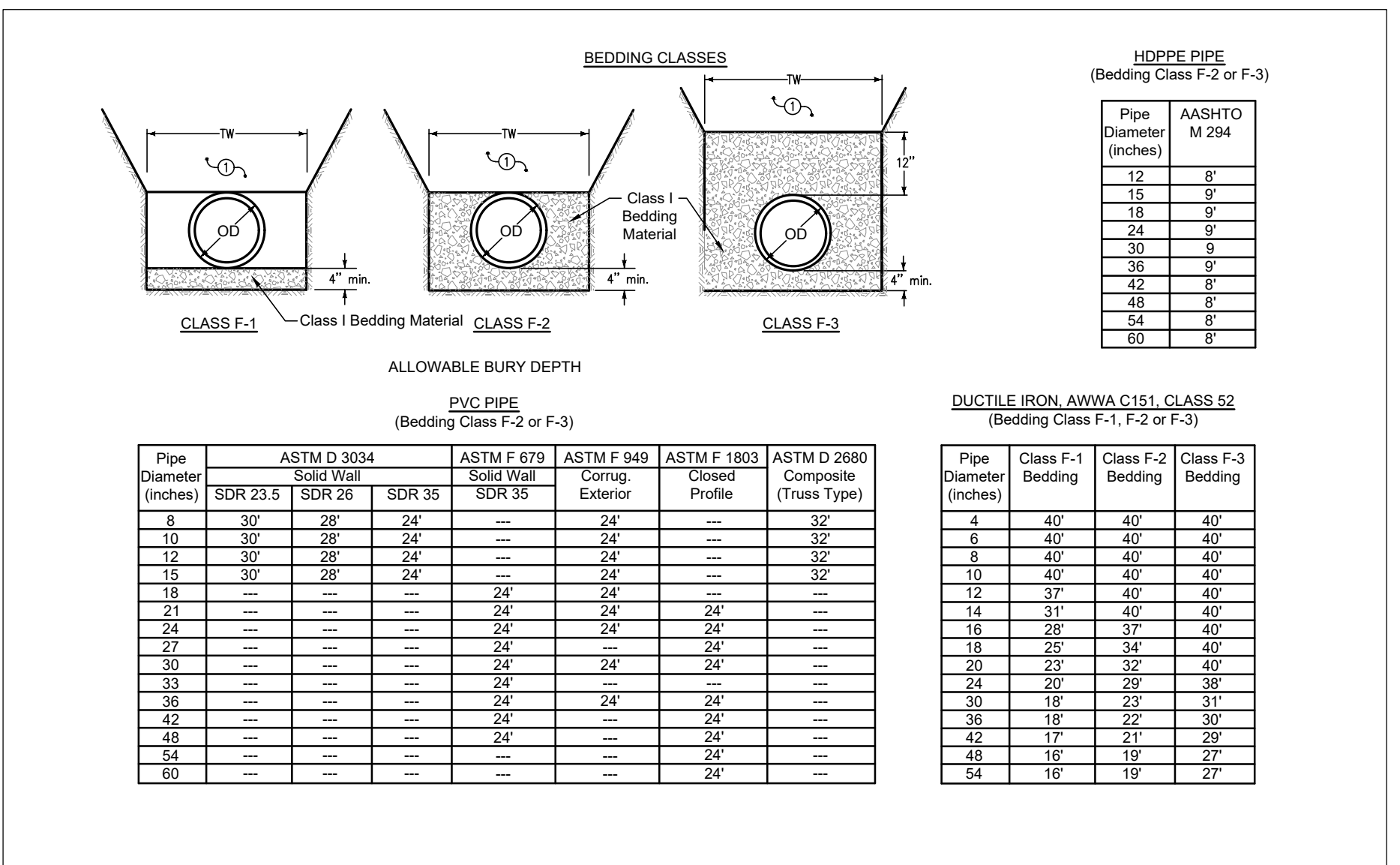
THRUST BLOCK (SUDAS WM-101)
SCALE: 1/50

REVISION	BY	DATE



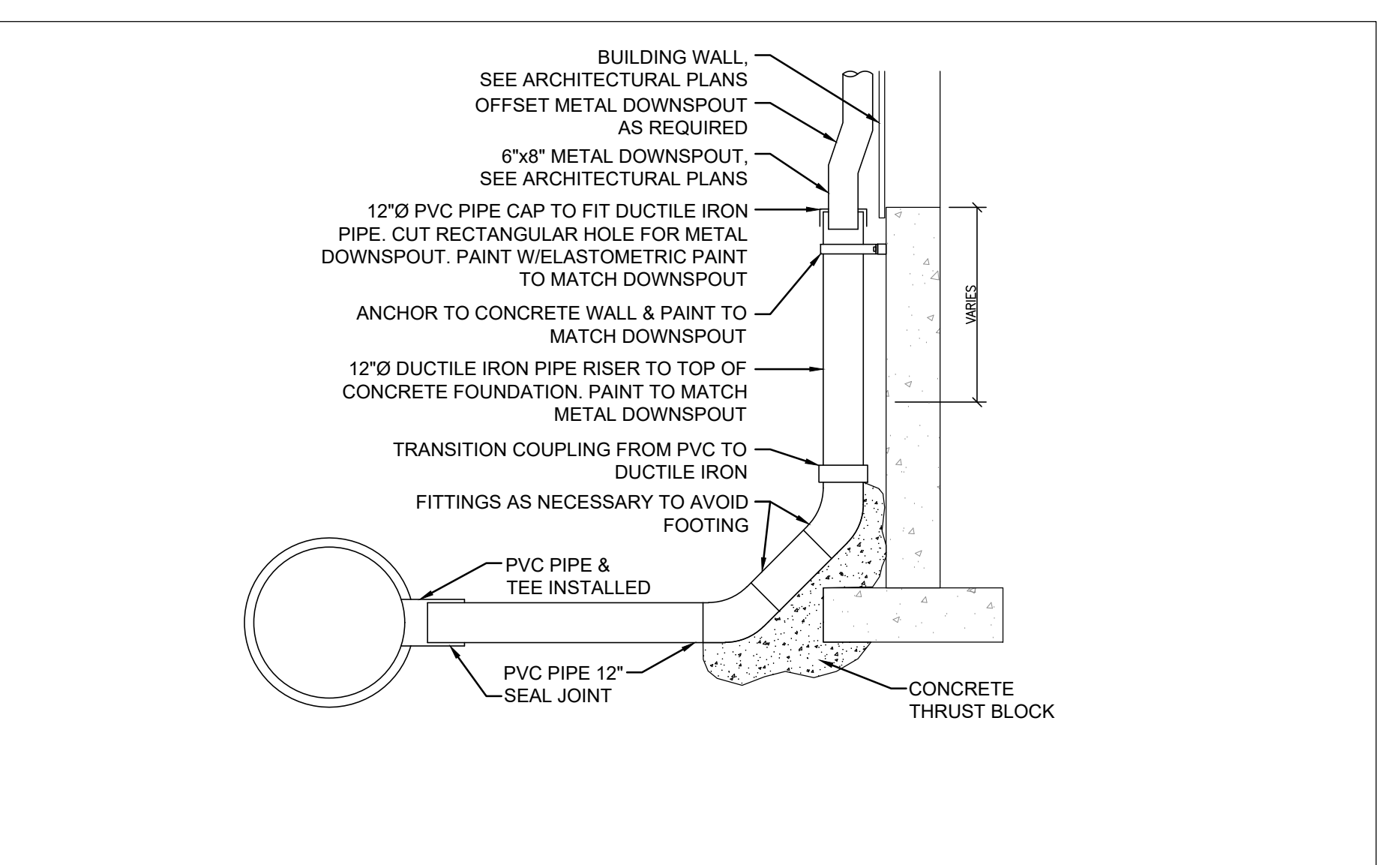
SINGLE GRATE INTAKE (SUDAS SW-511)
SCALE: 3/8" = 1'-0"

REVISION	BY	DATE



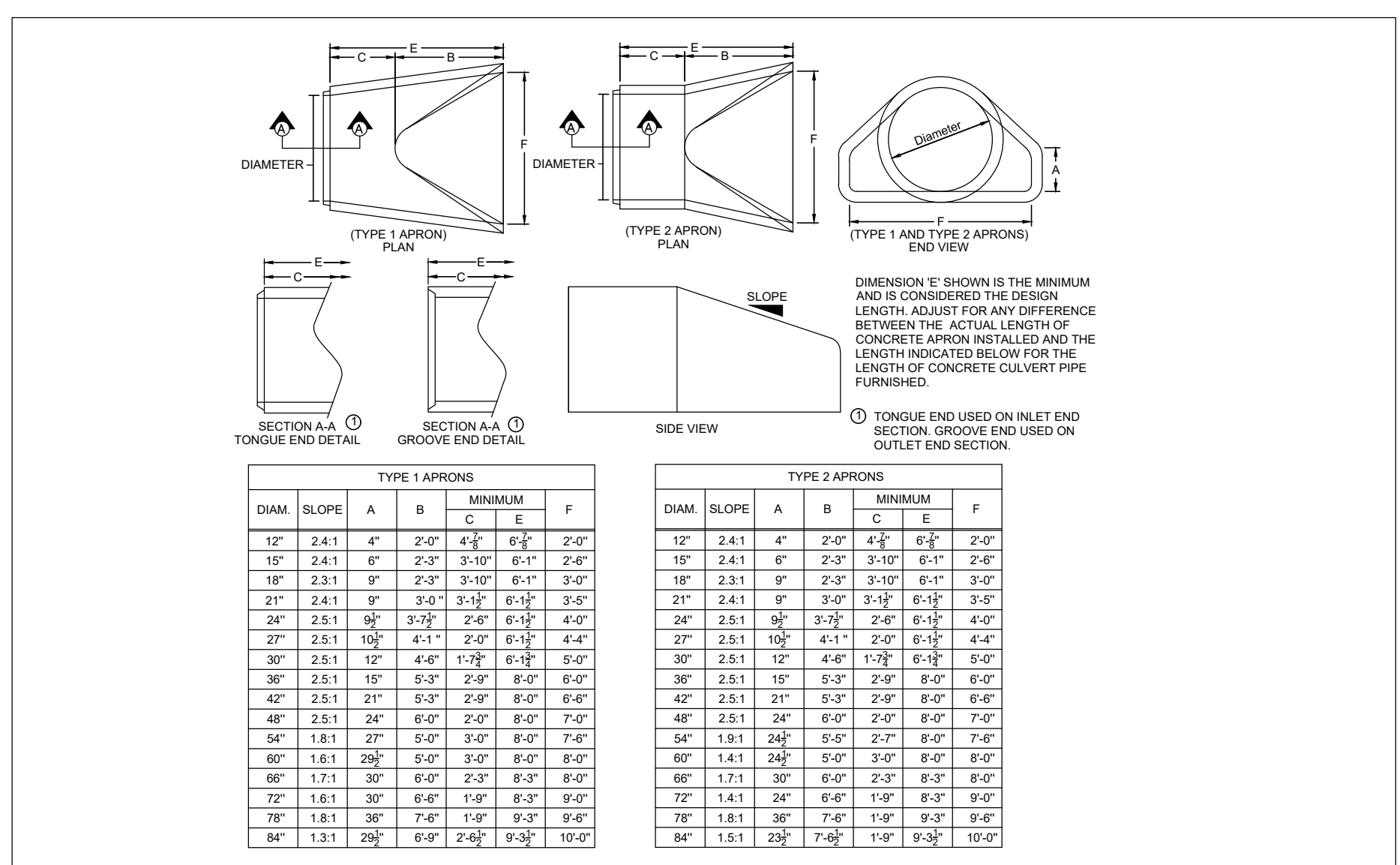
FLEXIBLE GRAVITY PIPE TRENCH BEDDING
SCALE: 1/40

REVISION	BY	DATE



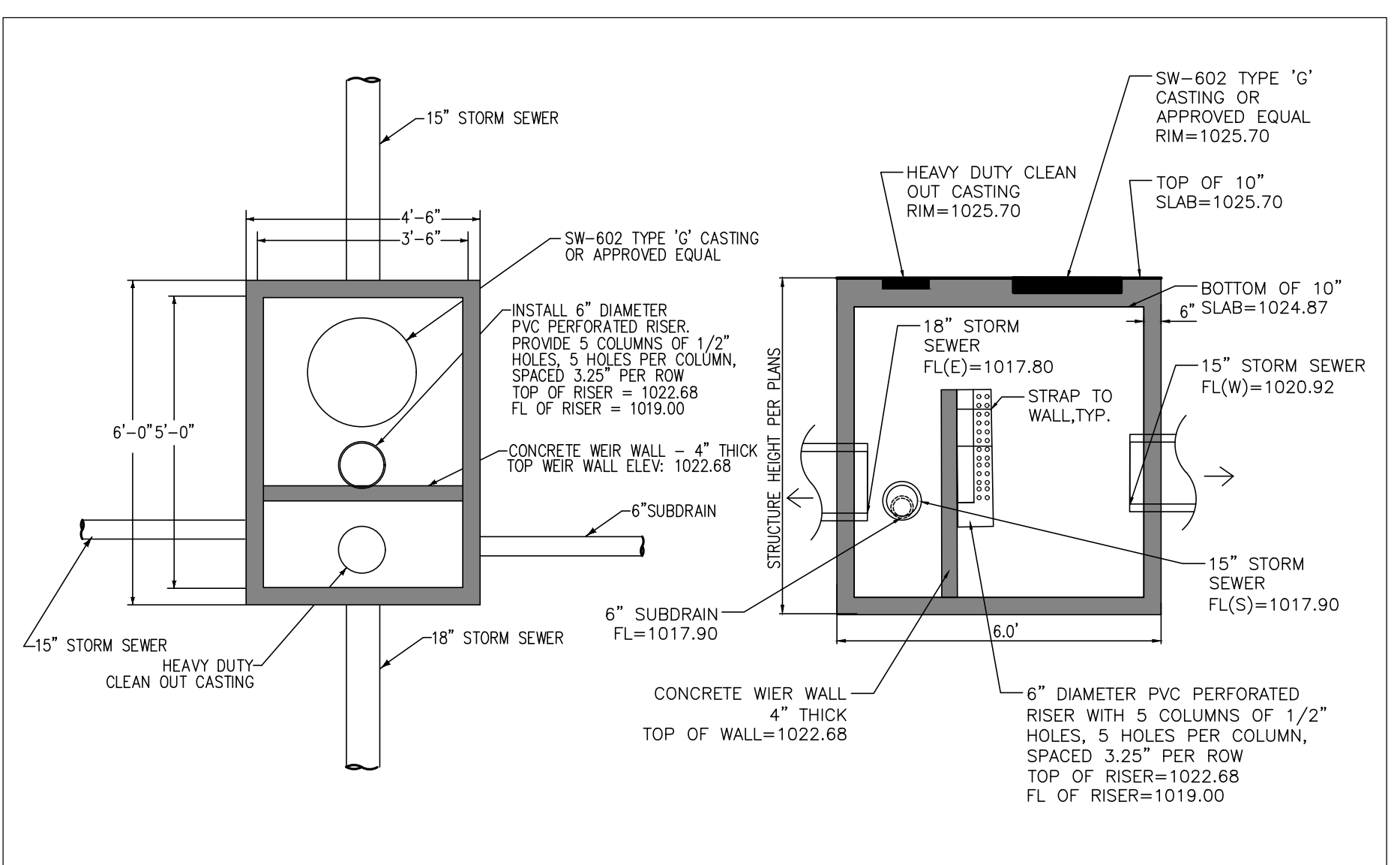
DOWNSPOUT CONNECTION
SCALE: 3/8" = 1'-0"

REVISION	BY	DATE



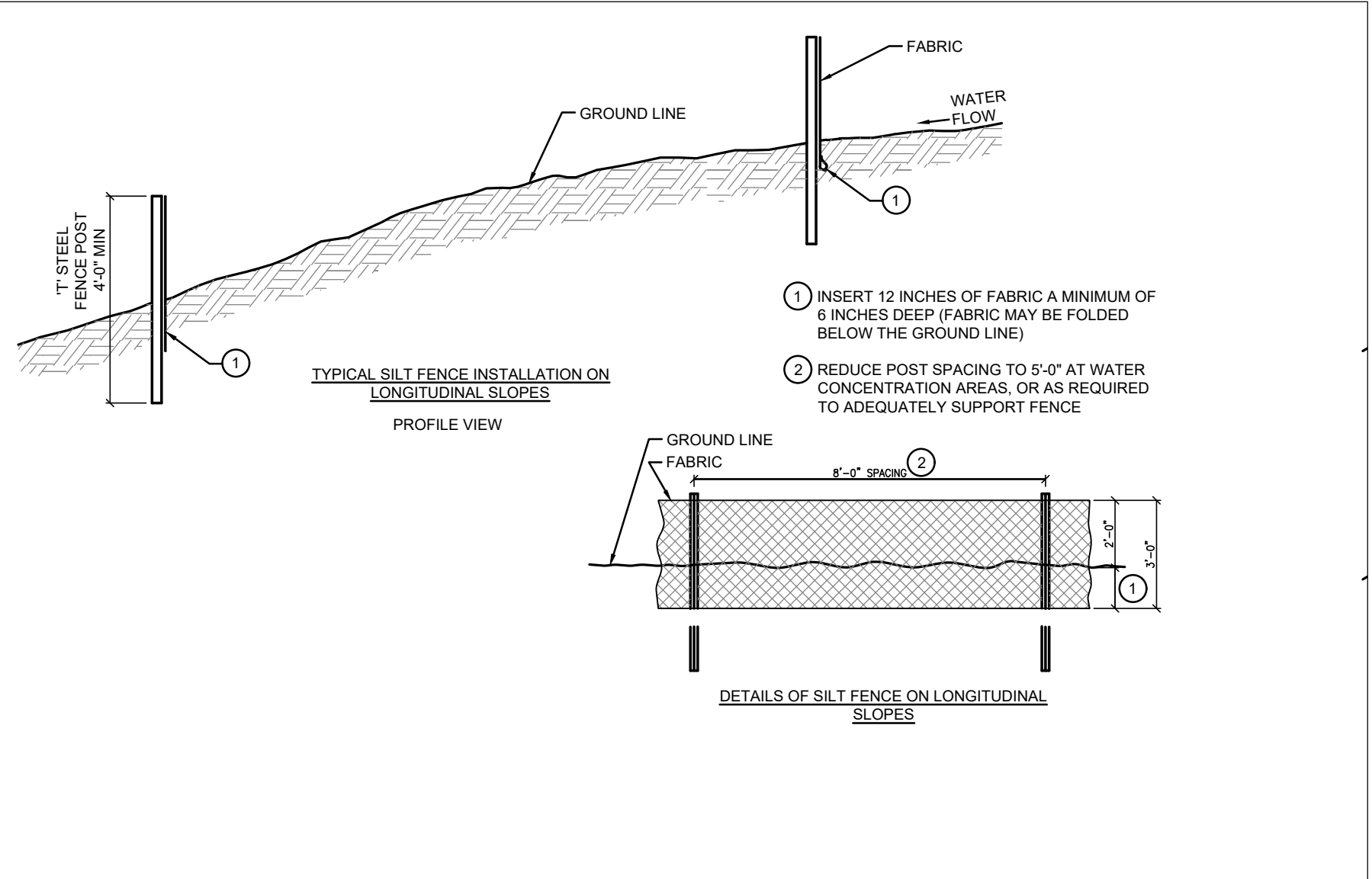
CIRCULAR CONCRETE APRON (SUDAS 222)
SCALE: 1/50

REVISION	BY	DATE



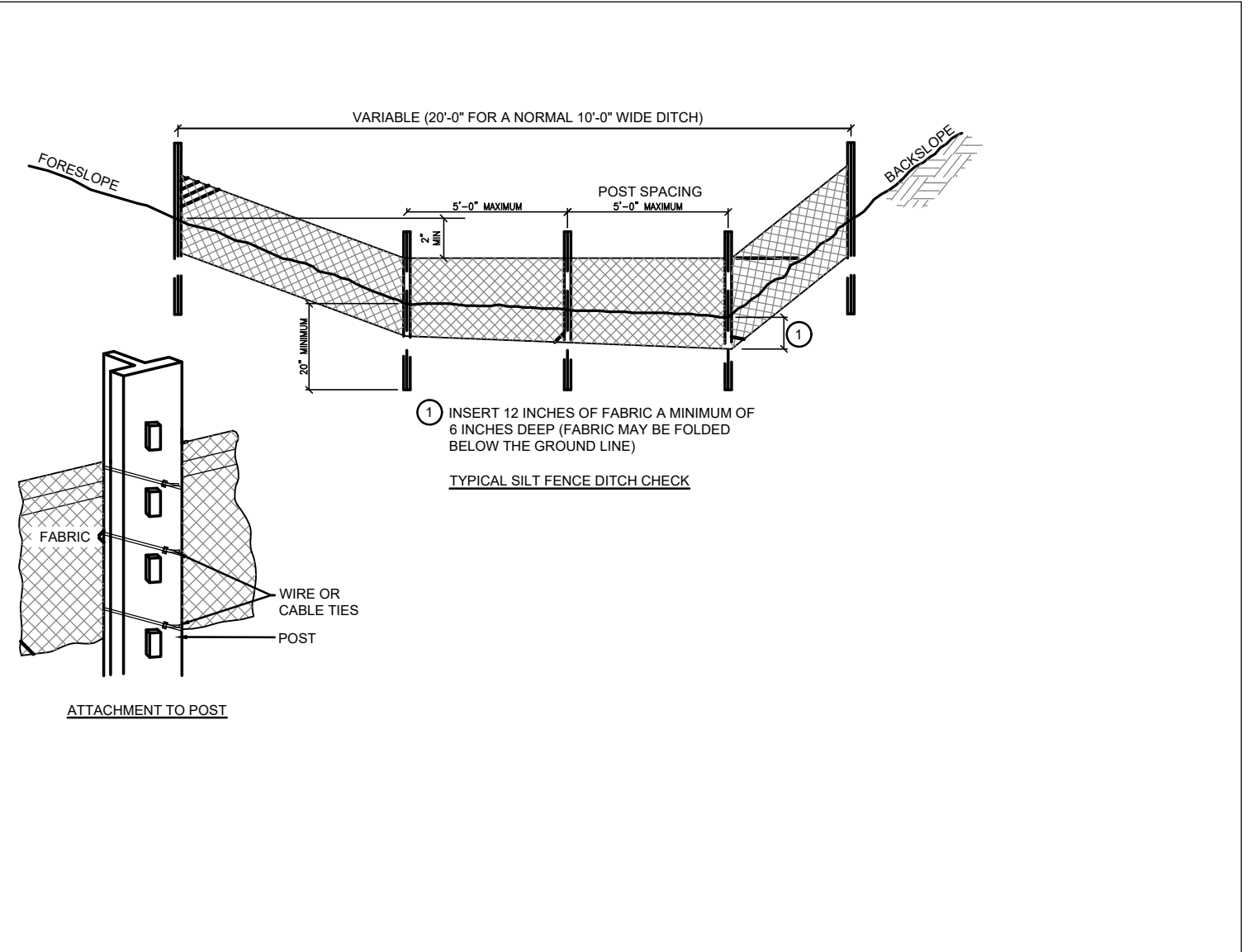
MODIFIED RECTANGULAR STORM SEWER MANHOLE (SUDAS SW-402)
SCALE: NTS

REVISION	BY	DATE



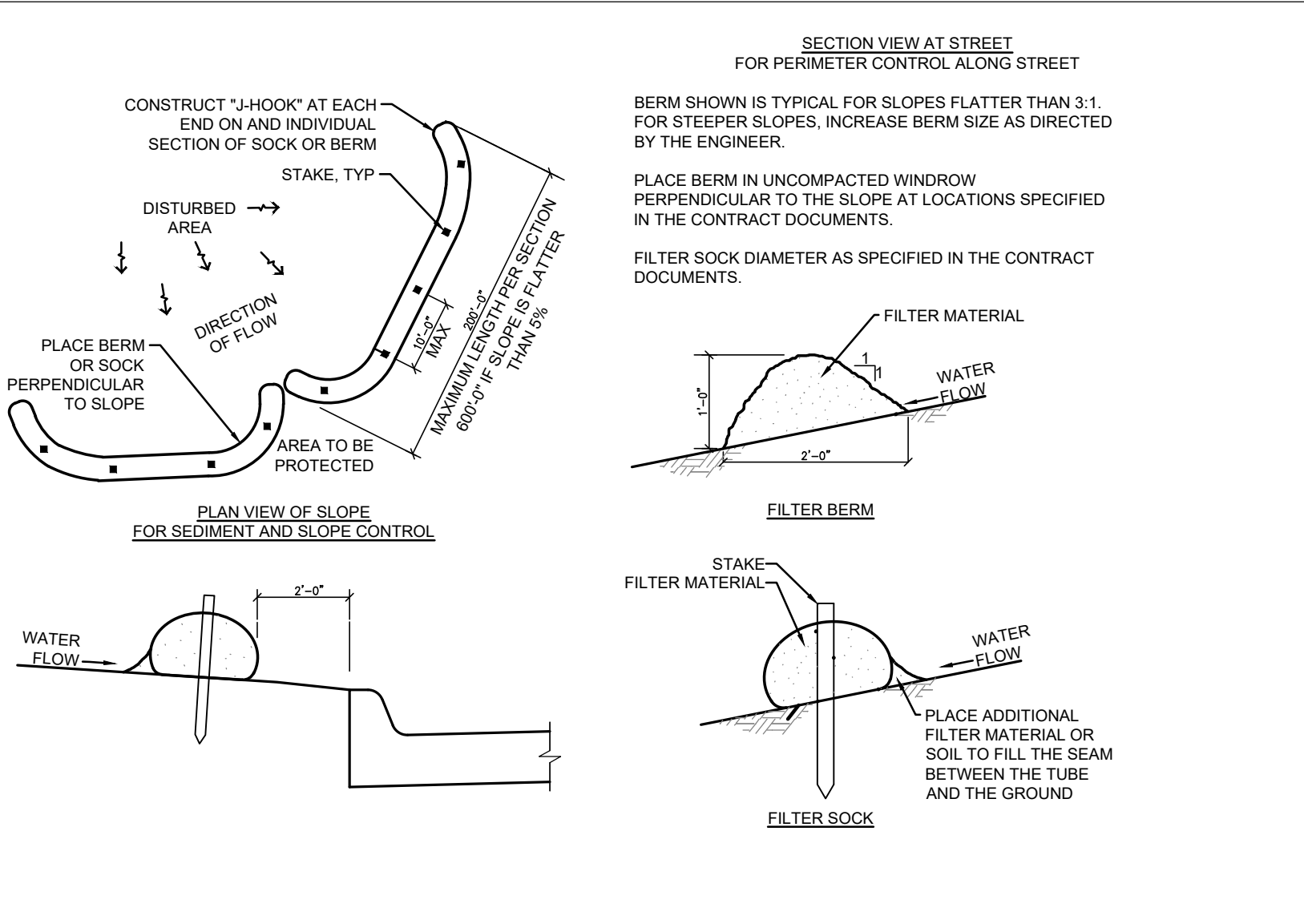
SILT FENCE (3 OF 3)

SCALE: 1:40	REVISION	BY	DATE
	ISSUE DATE	JMD	02/28/2018



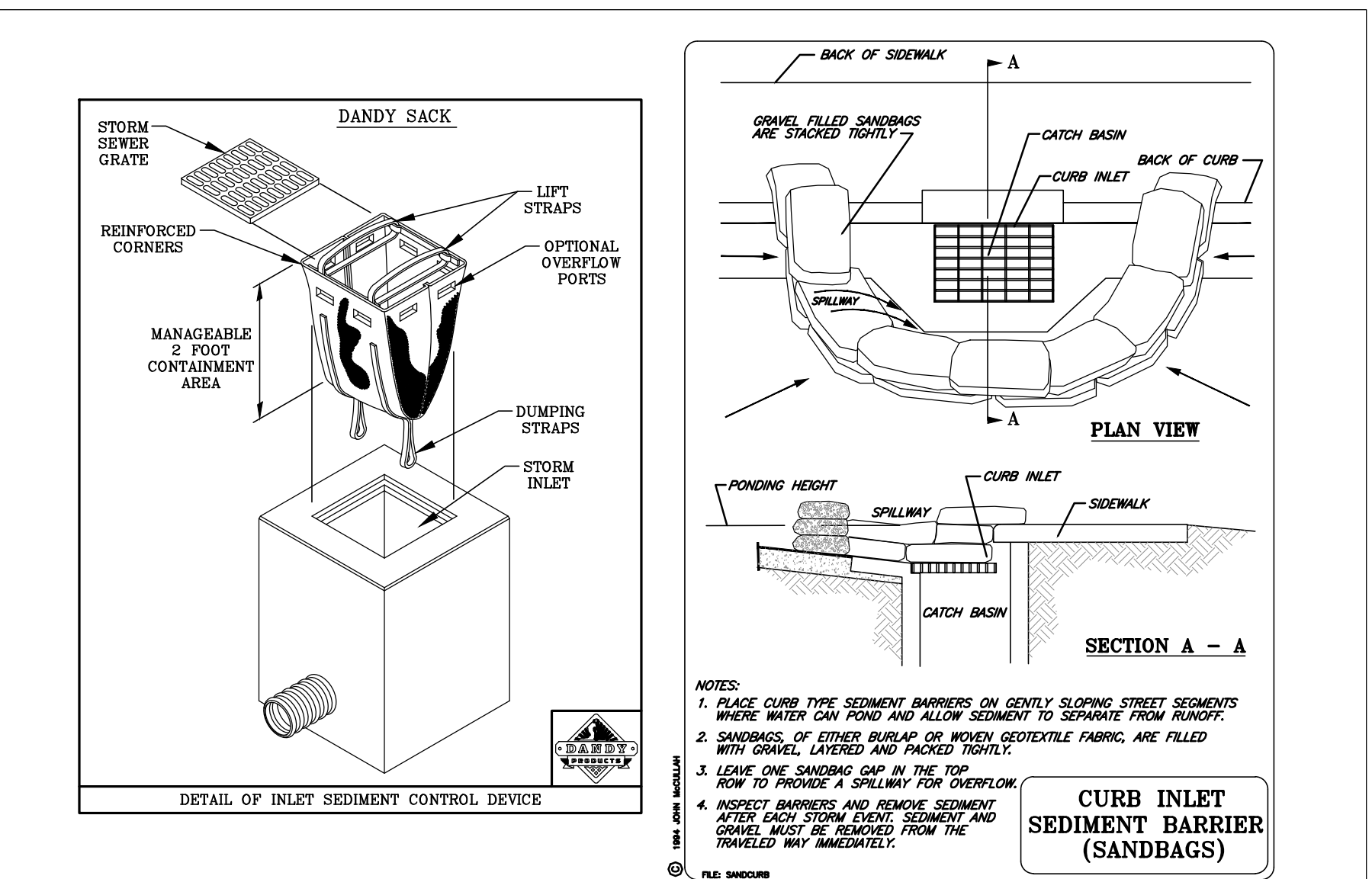
SILT FENCE (1 OF 3)

SCALE: 1/4" = 1'-0"	REVISION	BY	DATE
	ISSUE DATE	JMD	02/28/2018



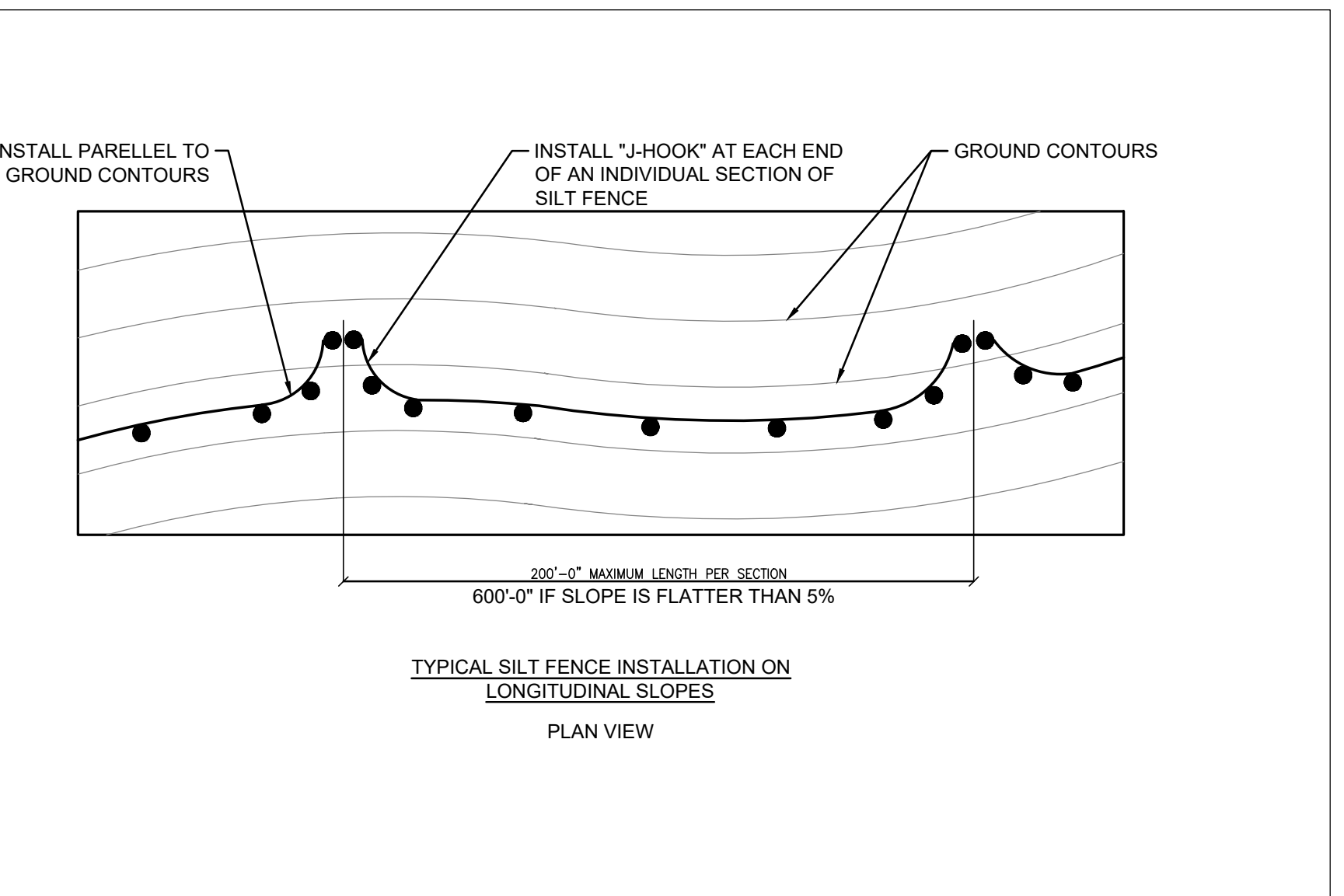
FILTER BERM AND FILTER SOCK

SCALE: 1:40	REVISION	BY	DATE
	ISSUE DATE	JMD	02/28/2018



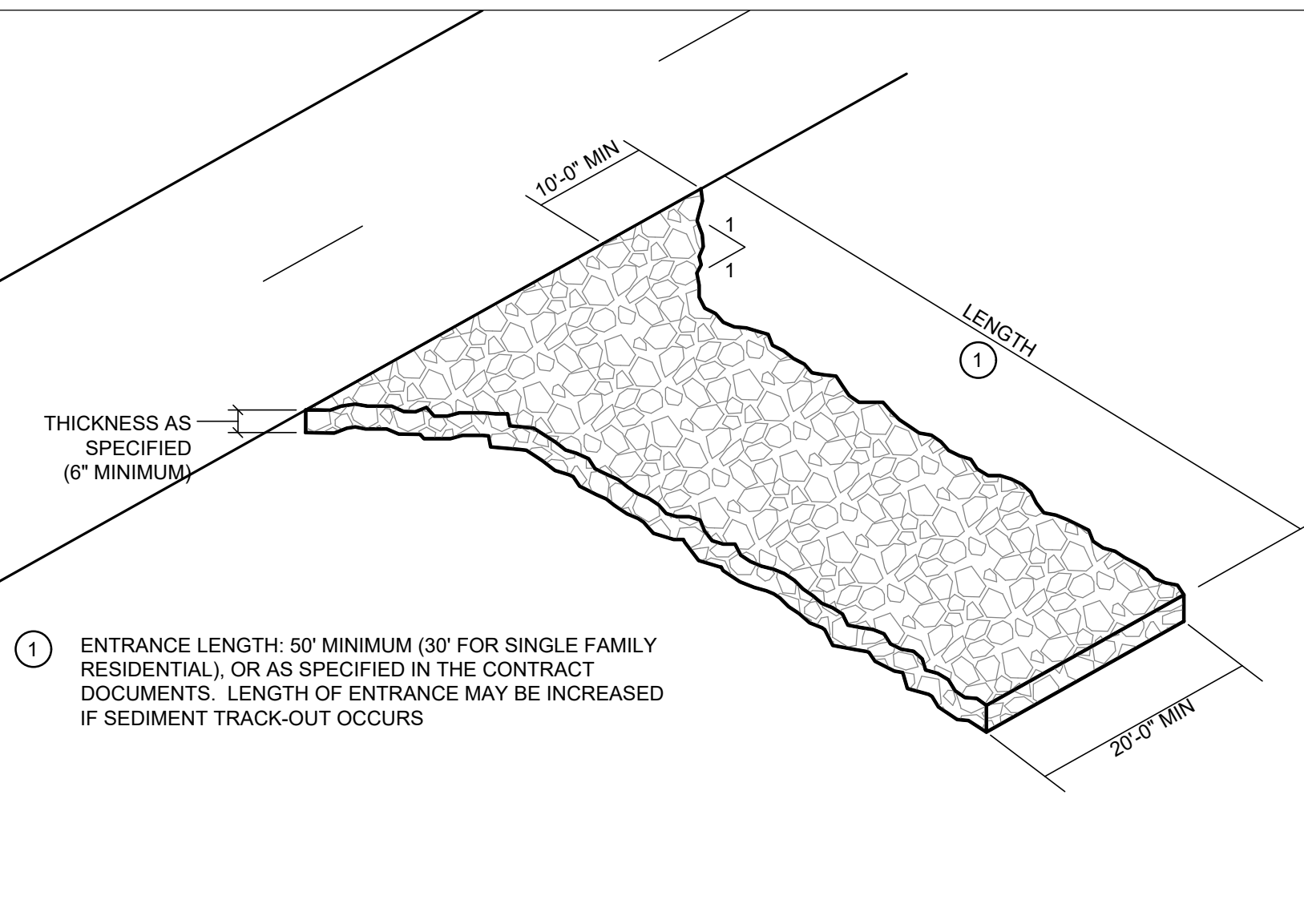
INLET SEDIMENT CONTROL DEVICES

SCALE:	REVISION	BY	DATE
	ISSUE DATE	JMD	02/28/2018



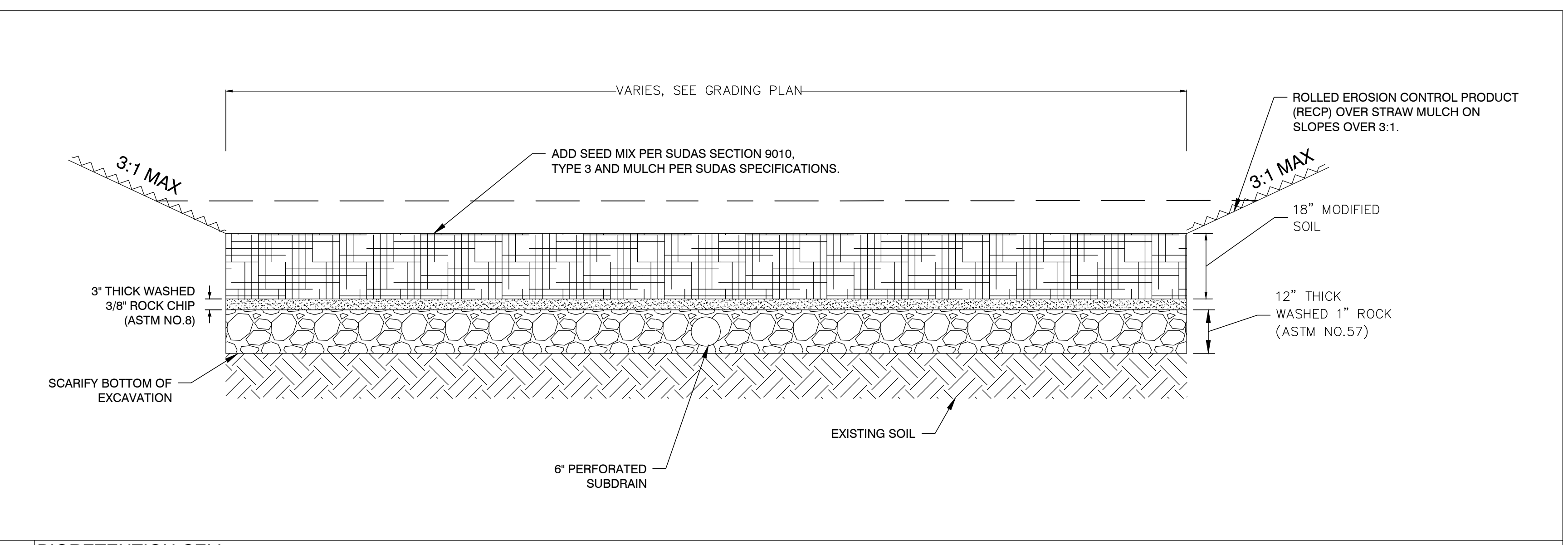
SILT FENCE (2 OF 3)

SCALE: 3/8" = 1'-0"	REVISION	BY	DATE
	ISSUE DATE	JMD	02/28/2018
	UPDATED DETAIL AND NOTES	JMD	05/23/2018



STABILIZED CONSTRUCTION ENTRANCE/EXIT

SCALE: 3/8" = 1'-0"	REVISION	BY	DATE
	ISSUE DATE	JMD	02/28/2018



BIORETENTION CELL

SCALE:	REVISION	BY	DATE
	ISSUE DATE		

REVISIONS	DATE
	DRAWN BY

CONSTRUCTION DETAILS

DRAWN BY RAH	DATE 03/09/2022
SCALE SEE DETAIL	JOB 007.081

PRELIMINARY NOT FOR CONSTRUCTION