Recorded As

Fence (Chain Link)

Water Main with Size

Sanitary Manhole

Storm Manhole

Sanitary Sewer with Size

Storm Sewer with Size

Single Storm Sewer Intake

Fence (Wood)

\_\_\_\_//\_\_\_\_

—— G(\*)——

—— W(\*)—— ——

—— S(\*) —— ——

—— ST(\*) —— —

**PROPOSED** 

\_\_\_\_X \_\_\_\_

\_\_\_\_//\_\_\_\_

\_\_\_\_ G \_\_\_\_

X 1225.25

7235

High Pressure Gas Main with Size — HPG(\*) — —

# UTILITY QUALITY SERVICE LEVELS

Test Hole Location for SUE w/ID

QUALITY LEVELS OF UTILITIES ARE SHOWN IN THE PARENTHESES WITH THE UTILITY TYPE AND WHEN APPLICABLE, SIZE. THE QUALITY LEVELS ARE BASED ON THE CI/

QUALITY LEVEL (D) INFORMATION IS DERIVED FROM EXISTING UTILITY RECORDS OR ORAL RECOLLECTIONS.

QUALITY LEVEL (C) INFORMATION IS OBTAINED BY SURVEYING AND PLOTTING VISIBLE ABOVE-GROUND UTILITY FEATURES AND USING PROFESSIONAL JUDGMENT IN CORRELATING THIS INFORMATION WITH QUALITY D INFORMATION.

QUALITY LEVEL (B) INFORMATION IS OBTAINED THROUGH THE APPLICATION OF APPROPRIATE SURFACE GEOPHYSICAL METHODS TO DETERMINE THE EXISTENCE AND APPROXIMATE HORIZONTAL POSITION OF SUBSURFACE UTILITIES.

QUALITY LEVEL (A) IS HORIZONTAL AND VERTICAL POSITION OF UNDERGROUND UTILITIES OBTAINED BY ACTUAL EXPOSURE OR VERIFICATION OF PREVIOUSLY EXPOSED SUBSURFACE UTILITIES, AS WELL AS THE TYPE, SIZE, CONDITION, MATERIAL, AND OTHER CHARACTERISTICS.

# TILITY WARNING

THE UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND/OR RECORDS OBTAINED. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES OR SUBSURFACE FEATURES SHOWN COMPRISE ALL SUCH ITEMS IN THE AREA, EITHER IN SERVICE OR ABANDONED THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UTILITIES OR SUBSURFACE FEATURES SHOWN ARE IN THE EXACT LOCATION INDICATED EXCEPT WHERE NOTED AS QUALITY LEVEL A.

# UTILITY CONTACT INFORMATION

NATURAL GAS

MADISON GAS & ELECTRIC 608-252-1552 - STEVE BEVERSDORF

**ELECTRICITY** 

MADISON GAS & ELECTRIC 608-252-7338 - BRIAN BIGGE

SANITARY SEWER

608-266-4751 - LARRY NELSON

CITY OF MADISON 608-266-4651

PROPERTY ADDRESS 737 HILLDALE WAY, MADISON, WI

4502 VERNON BLVD., MADISON, WI 320 PRICE PLACE, MADISON, WI

> PARCEL NUMBER 070920121012

070920120072 070920120056

**ZONING** PD - PLANNED DEVELOPMENT DISTRICT

# GENERAL CONDITIONS

- THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE MUNICIPALITY TWO WORKING DAYS (48 HOURS) PRIOR TO THE START OF CONSTRUCTION.
- 2. THE CONTRACTOR SHALL INDEMNIFY THE OWNER, THE ENGINEER, AND THE MUNICIPALITY, THEIR AGENTS, ETC. FROM ALL LIABILITY INVOLVED WITH THE CONSTRUCTION, INSTALLATION, AND TESTING OF THE WORK ON THIS PROJECT.
- 3. SITE SAFETY SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- 4. THE BIDDER WILL BE SOLELY RESPONSIBLE FOR DETERMINING QUANTITIES AND SHALL STATE SUCH QUANTITIES IN HIS PROPOSAL. HE SHALL BASE HIS BID ON HIS OWN ESTIMATE OF THE WORK REQUIRED AND SHALL NOT RELY ON THE ENGINEER'S ESTIMATE.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING SOIL CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION. A GEOTECHNICAL REPORT IS AVAILABLE FROM THE OWNER. THE CONTRACTOR SHALL ABIDE BY THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER.
- 6. THE CONTRACTOR IS RESPONSIBLE FOR EXAMINING ALL SITE CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION AND SHALL COMPARE FIELD CONDITIONS WITH DRAWINGS.
- 7. THE CONTRACTOR SHALL CONDUCT HIS WORK ACCORDING TO THE REQUIREMENTS OF THE PERMITS.
- THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL UTILITY INFORMATION SHOWN ON THE PLANS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL CALL DIGGER'S HOTLINE AT 1-800-242-8511 TO NOTIFY THE UTILITIES OF HIS INTENTIONS, AND TO REQUEST FIELD STAKING OF EXISTING UTILITIES.
- CONTRACTOR IS ADVISED THAT ALL MUD AND DEBRIS MUST NOT BE DEPOSITED ONTO THE ADJACENT ROADWAYS PER THE REQUIREMENT OF THE MUNICIPALITY OR OTHER APPROPRIATE GOVERNMENT AGENCIES
- 10. ANY ADJACENT PROPERTIES OR ROAD RIGHT-OF-WAYS WHICH ARE DAMAGED DURING CONSTRUCTION MUST BE RESTORED BY THE CONTRACTOR. THE COST OF THE RESTORATION IS CONSIDERED INCIDENTAL, AND SHOULD BE INCLUDED IN THE BID PRICES.

# STORM SEWER & STORM WATER MANAGEMENT NOTES

STORM SEWER AND STORMWATER MANAGEMENT SHALL BE AS FOLLOWS:

- STORM SEWER PIPE BEDDING SHALL BE CLEAR STONE.
- MINIMUM COVER FOR ALL STORM SEWER SHALL BE 2'.
- EXCAVATED MATERIAL FROM THE TRENCH NOT SUITABLE FOR BACKFILL AS DEEMED BY THE PUBLIC SERVICES DIRECTOR SHALL BE HAULED OFF-SITE AND SELECT TRENCH BACKFILL WILL BE REQUIRED.
- EXTREME CAUTION MUST BE FOLLOWED REGARDING THE COMPACTION OF ALL UTILITY TRENCHES. MECHANICALLY COMPACTED GRANULAR BACKFILL IS REQUIRED UNDER AND WITHIN 5 FEET OF ALL PAVEMENT INCLUDING SIDEWALKS AND FUTURE PARKING AREA AS SPECIFIED ON PLANS. FLOODING OF BACKFILL MATERIAL IS NOT ALLOWED. THE COST OF THIS GRANULAR MATERIAL AND ITS COMPACTION IS CONSIDERED INCIDENTAL AND SHALL BE INCLUDED IN THE COST OF THE PROPOSED UTILITY.
- PRIOR TO FINAL PAVING OPERATIONS, THE UTILITY CONTRACTOR SHALL ADJUST ALL MANHOLE AND INLET RIMS AND VALVE BOXES TO FINISHED GRADE.
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE OWNER WITH A SET OF MARKED-UP PRINTS SHOWING ALL CHANGES MADE DURING THE CONSTRUCTION PROCESS. ANY CHANGES TO THE DRAWINGS OR ADDITIONAL ITEMS MUST BE REPORTED TO THE OWNER.
- 10. STORM SEWER WITHIN STREET RIGHT-OF-WAYS SHALL BE REINFORCED CONCRETE PIPE.
- 11. EXCAVATED MATERIAL FROM THE TRENCH NOT SUITABLE FOR BACKFILL AS DEEMED BY THE ENGINEER SHALL BE REMOVED AND REPLACED WITH SELECT TRENCH BACKFILL.
- 13. MANHOLES 3' DEEP AND GREATER SHALL BE CONSTRUCTED WITH STEPS.
- 14. INLETS AT LOW POINTS SHALL HAVE TYPE NEENAH TYPE R GRATES. INLETS ON GRADE SHALL BE DIRECTIONAL TYPE L. INLETS SHALL ALL BE STAMPED "DRAINS TO RIVER".
- 15. ALL INFILTRATION BASINS SHALL INCLUDE ENGINEERED SOILS OR PERMAMATRIX SOIL AMENDMENT APPLIED PER MANUFACTURER RECOMMENDATIONS.
- 16. ALL STORM WATER MANAGEMENT FACILITIES SHALL BE SEEDED WITH A NATIVE SEED MIXTURE WITHIN THE LIMITS OF THE OUTLOT OR EASEMENT. THE NATIVE SEED MIXTURE SHALL BE APPROVED BY THE ENGINEER.
- 17. ALL STORM WATER FACILITIES SHALL CONFORM TO WisDNR TECHNICAL STANDARDS FOR PRE AND POST CONSTRUCTION STORM WATER MANAGEMENT.
- END SECTIONS ON ALL PIPES 18" AND GREATER.

18. THE LAST TWO PIPES SHALL BE STRAPPED TOGETHER AT

- 19. TRASH GRATES SHALL BE PROVIDED ON ALL END SECTIONS ON ENCLOSED STORM SEWER NETWORKS. 20. EROSION MAT IS REQUIRED FOR ALL RESTORATION ON
- CHANNEL WATER. 21. BIODEGRADABLE EROSION MAT AND BIODEGRADABLE STAPLES ARE REQUIRED ON ALL SLOPES LESS THAN 3:1 OUTSIDE OF DRAINAGE CHANNELS WHERE EROSION MAT IS REQUIRED. EROSION MAT SHALL BE PROVIDED IN ALL

SLOPES AT OR GREATER THAN 4:1, AND IN AREAS THAT

- 22. SILT FENCE AND INLET PROTECTION REMOVAL IS REQUIRED AFTER VEGETATION HAS BEEN ESTABLISHED.
- 23. STORM SEWER SHALL BE HDPE UNLESS OTHERWISE SPECIFIED ON PLANS.

STREET TERRACES.

- 24. NYLOPLAST STRUCTURES SHALL MEET ALL MANUFACTURERS INSTALLATION RECOMMENDATIONS.
- 25. NYLOPLAST STRUCTURES SHALL HAVE STANDARD FRAMES/GRATES UNLESS OTHERWISE NOTED ON THE PLAN
- 12. ADJUSTMENT RINGS SHALL HAVE A MINIMUM HEIGHT OF 4" AND A MAXIMUM HEIGHT OF 12". ADJUSTMENT RINGS FOR STORM MANHOLES SHALL BE POLYETHYLENE PLASTIC OR APPROVED EQUAL. CURB INLET ADJUSTMENT RINGS SHALL BE CONCRETE

# SANITARY SEWER

- SANITARY SEWER SHALL BE PVC AND BEDDED WITH CLASS C BEDDING (CLEAR STONE). SEWER SHALL BE SDR-35 FOR DEPTHS UP TO 20' AND SDR-26 FOR DEPTHS GREATER THAN
- TRACER WIRE SHALL BE INSTALLED WITH ALL NEW LATERALS IN ACCORDANCE TO THE STANDARD DETAIL
- TRACER WIRE BOXES SHALL BE PROVIDED. "SEWER" SHALL BE STAMPED IN THE LID OF THE ACCESS BOX.
- 4. ALL MANHOLE CASTINGS SHALL BE NEENAH R-1550 WITH TYPE B NON-ROCKING LIDS AND CONCEALED PICK HOLES. EXTERNAL CHIMNEY SEALS SHALL BE INSTALLED.
- EXCAVATED MATERIAL FROM THE TRENCH NOT SUITABLE FOR BACKFILL AS DEEMED BY THE ENGINEER SHALL BE REMOVED AND REPLACED WITH SELECT TRENCH BACKFILL
- MANDREL TESTING IS REQUIRED ON ALL SANITARY SEWER LOW PRESSURE AIR TESTS ARE REQUIRED ON ALL NEW

SANITARY SEWER CONSTRUCTION.

- LATERAL ENDS SHALL BE CAPPED WITH A GLUED ON CAP AND MARKED WITH A PAINTED 4X4 POST.
- ALL SANITARY SEWER CONSTRUCTION SHALL MEET THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN.
- 9. MANHOLES SHALL BE CONSTRUCTED WITH STEPS.
- 10. DROP MANHOLES SHALL BE OUTSIDE DROP PRECAST CONCRETE STRUCTURES.
- ALL MANHOLE JOINTS SHALL BE WRAPPED WITH GATOR WRAP OR APPROVED EQUAL
- 12. ADJUSTMENT RINGS SHALL HAVE A MINIMUM HEIGHT OF 4" AND A MAXIMUM HEIGHT OF 12". ADJUSTMENT RINGS SHALL BE POLYETHYLENE PLASTIC OR APPROVED EQUAL

# WATER MAIN

WOOD POST.

DIRECTOR.

- WATER MAIN SHALL BE DUCTILE IRON UNLESS OTHERWISE APPROVED, AND BEDDED WITH TYPE 3 EMBEDMENT (SAND OR SAND SCREENINGS). BEDDING SHALL BE A MINIMUM OF 6" UNDER AND 12" OVER TOP OF THE PIPE.
- WATER MAIN SHALL BE INSTALLED WITH TRACER WIRE. TRACER WIRE SHALL EXTEND TO THE SURFACE AT ALL HYDRANTS IN A TRACER WIRE ACCESS BOX.
- MECHANICAL JOINT FITTINGS WITH MEGA LUGS ARE REQUIRED FOR ALL DIRECTIONAL CHANGE FITTINGS AND
- WATERMAIN ENDS. ALL BOLTS SHALL BE STAINLESS STEEL. ALL FITTINGS SHALL BE "MADE IN AMERICA" CERTIFIED.

4. LATERAL ENDS SHALL BE MARKED WITH A PAINTED 4X4

- WATER MAINS SHALL UNDERGO A PRESSURE AND LEAKAGE TEST. SERVICES SHALL BE TESTED TO THE CURB STOP. SERVICES 4" AND LAGER WITH JOINTED PIPE SHALL BE TESTED AGAINST THE VALVE WITH A SECOND TEST OUT TO THE PLUG. THE SECOND TEST MAY BE OF SHORTER DURATION AS APPROVED BY THE PUBLIC SERVICES
- EXCAVATED MATERIAL FROM THE TRENCH NOT SUITABLE FOR BACKFILL AS DEEMED BY THE ENGINEER SHALL BE REMOVED AND REPLACED WITH SELECT TRENCH BACKFILL
- 7. ALL WATER MAIN CONSTRUCTION SHALL MEET THE STANDARD SPECIFICATIONS FOR SEWER AND WATER
- CONSTRUCTION IN WISCONSIN. 8. INSULATION SHALL BE PROVIDED AT ALL STORMS SEWER
- CROSSINGS OF MAINS AND LATERALS. 9. WATER SERVICES 2" OR SMALLER SHALL BE TYPE "K"
- COPPER OR APPROVED EQUAL. 10. WATER MAIN SHALL HAVE A MINIMUM COVER OF 6.5' WITH PROPER CLEARANCES BETWEEN THE WATERMAIN AND
- 11. FIRE HYDRANTS SHALL BE WATEROUS PACER WB67 OR APPROVED EQUAL WITH A 5' FIBERGLASS ROD WITH SPRING: RED AND WHITE IN COLOR. A STORZ NOZZLE SHALL BE PROVIDED.

STORM/SANITARY SEWERS

- 12. CURB BOXES SHALL BE BINGHAM AND TAYLOR BUFFALO TYPE OR APPROVED EQUAL AND INSTALLED WITH THE EXTENSION ROD AND GUIDE RING.
- 13. CURB VALVES SHALL BE MUELLER H15209 OR APPROVED EQUAL FOR 1" SERVICES OR EQUIVALENT FOR LARGER SERVICES.
- 14. CORPORATION STOPS SHALL BE MUELLER H15008 OR APPROVED EQUAL FOR 1" SERVICES OR EQUIVALENT FOR LARGER SERVICES.
- 15. WATER VALVES SHALL BE AMERICAN FLOW CONTROL SERIES 2500 RESILIENT WEDGE GATE VALVES OR APPROVED EQUAL.

# ADDITIONAL UTILITY NOTES

- THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO THE START OF CONSTRUCTION.
- BEFORE PROCEEDING WITH ANY UTILITY CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE EACH EXISTING LATERAL OR POINT OF CONNECTION AND VERIFY THE LOCATION AND ELEVATION OF ALL UTILITIES. IF ANY EXISTING UTILITIES ARE NOT AS SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL NOTIFY THE **ENGINEER IMMEDIATELY FOR POSSIBLE REDESIGN**
- PRIOR TO FINAL PAVING OPERATIONS, THE UTILITY CONTRACTOR SHALL ADJUST ALL MANHOLE AND INLET RIMS AND VALVE BOXES TO FINISHED GRADE.
- 4. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE OWNER WITH A SET OF MARKED-UP PRINTS SHOWING ALL CHANGES MADE DURING THE CONSTRUCTION PROCESS. ANY CHANGES TO THE DRAWINGS OR ADDITIONAL ITEMS MUST BE REPORTED TO THE OWNER.
- 5. THE PROPOSED IMPROVEMENTS SHALL BE CONSTRUCTED ACCORDING TO WISCONSIN ADMINISTRATIVE CODE. SECTION SPS 382-384, LATEST EDITION, THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION, AND THE LOCAL ORDINANCES AND SPECIFICATIONS.
- 6. ALL CONNECTIONS TO EXISTING PIPES AND MANHOLES SHALL BE CORED CONNECTIONS.
- PROPOSED SANITARY SEWER, WATER MAIN, AND INTERNALLY CONNECTED STORM SEWER SHOWN ON THIS PLAN SHALL TERMINATE AT POINT FIVE (5) FEET FROM THE EXTERIOR BUILDING WALL. STORM SEWER CONNECTING TO EXTERIOR DOWN SPOUTS SHALL BE PER DETAILS ON THE ARCHITECTURAL PLANS. THE EXACT LOCATION OF ALL DOWN SPOUTS SHALL BE PER THE ARCHITECTURAL PLANS.
- 8. EXTREME CAUTION MUST BE FOLLOWED REGARDING THE COMPACTION OF ALL UTILITY TRENCHES. MECHANICALLY COMPACTED GRANULAR BACKFILL IS REQUIRED UNDER AND WITHIN 5 FEET OF ALL PAVEMENT INCLUDING SIDEWALKS. FLOODING OF BACKFILL MATERIAL IS NOT ALLOWED. THE COST OF THIS GRANULAR MATERIAL AND ITS COMPACTION IS CONSIDERED INCIDENTAL AND SHALL BE INCLUDED IN THE COST OF THE PROPOSED UTILITY.
- TRACER WIRE SHALL BE INSTALLED ON ALL BURIED NON-METALLIC SANITARY SEWERS, PRIVATE SANITARY INTERCEPTOR MAIN SEWERS, STORM BUILDING SEWERS, AND PRIVATE STORM INTERCEPTOR MAIN SEWERS THAT DISCHARGE TO MUNICIPAL MAINS. TRACER WIRE SHALL BE A MINIMUM OF 12-GAUGE, INSULATED, SINGLE-CONDUCTOR COPPER WIRE OR EQUIVALENT. TRACER WIRE COLOR SHALL BE BLUE FOR POTABLE WATER, GREEN FOR SANITARY SEWER, AND BROWN FOR STORM SEWER.



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5010 VOGES ROAD

MADISON, WISCONSIN 53718

608-838-0444

33 BOYLSTON ST, STE 3000

PROJECT INFORMATION

HILLDALE SHOPPING **CENTER** 

HILLDALE

750 N Midvale Blvd Madison, WI 53705

ISSUANCE AND REVISIONS

# DATE DESCRIPTION 8-01-2025 CITY SUBMITTAL

KEY PLAN

SHEET INFORMATION

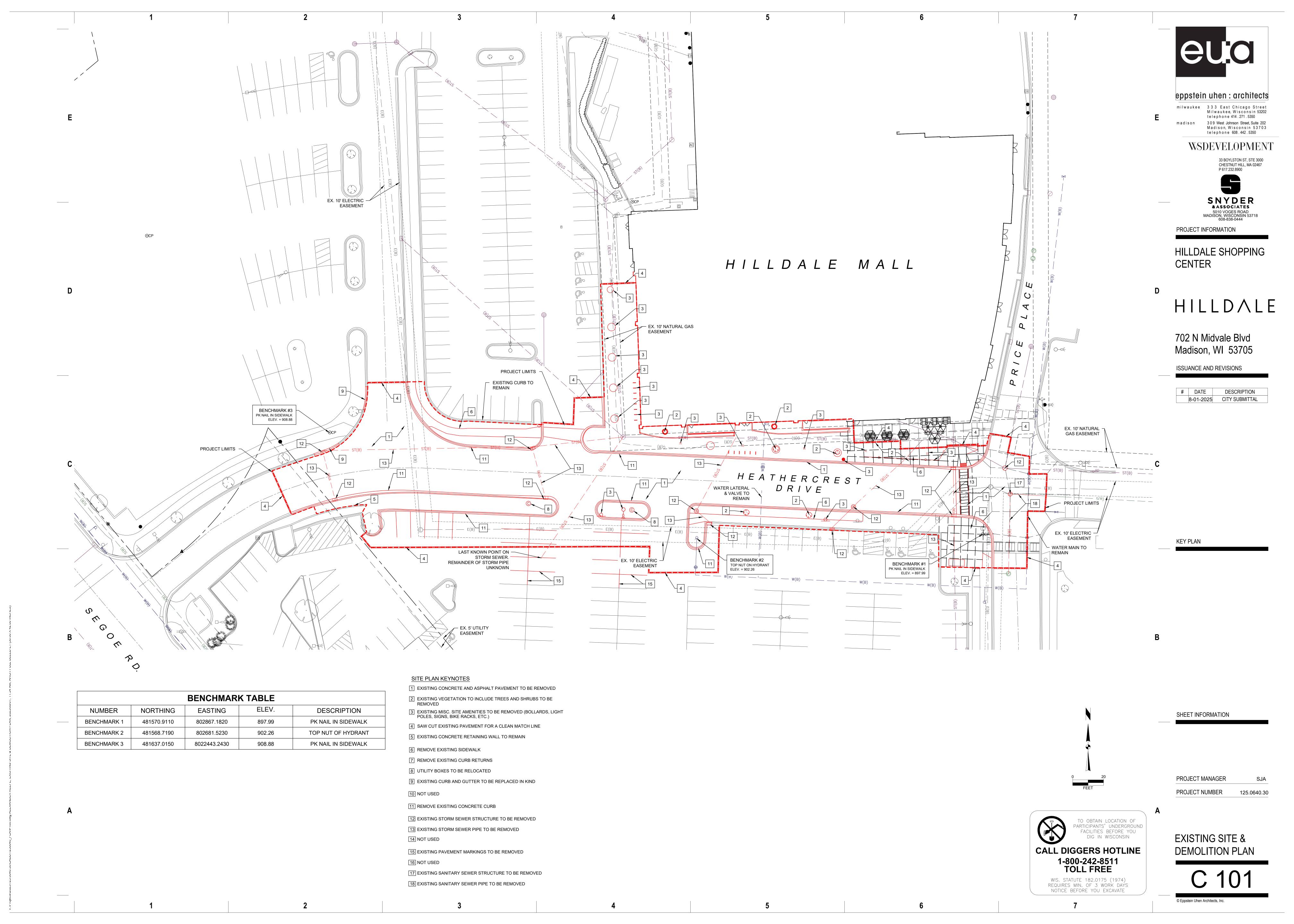
PROJECT MANAGER

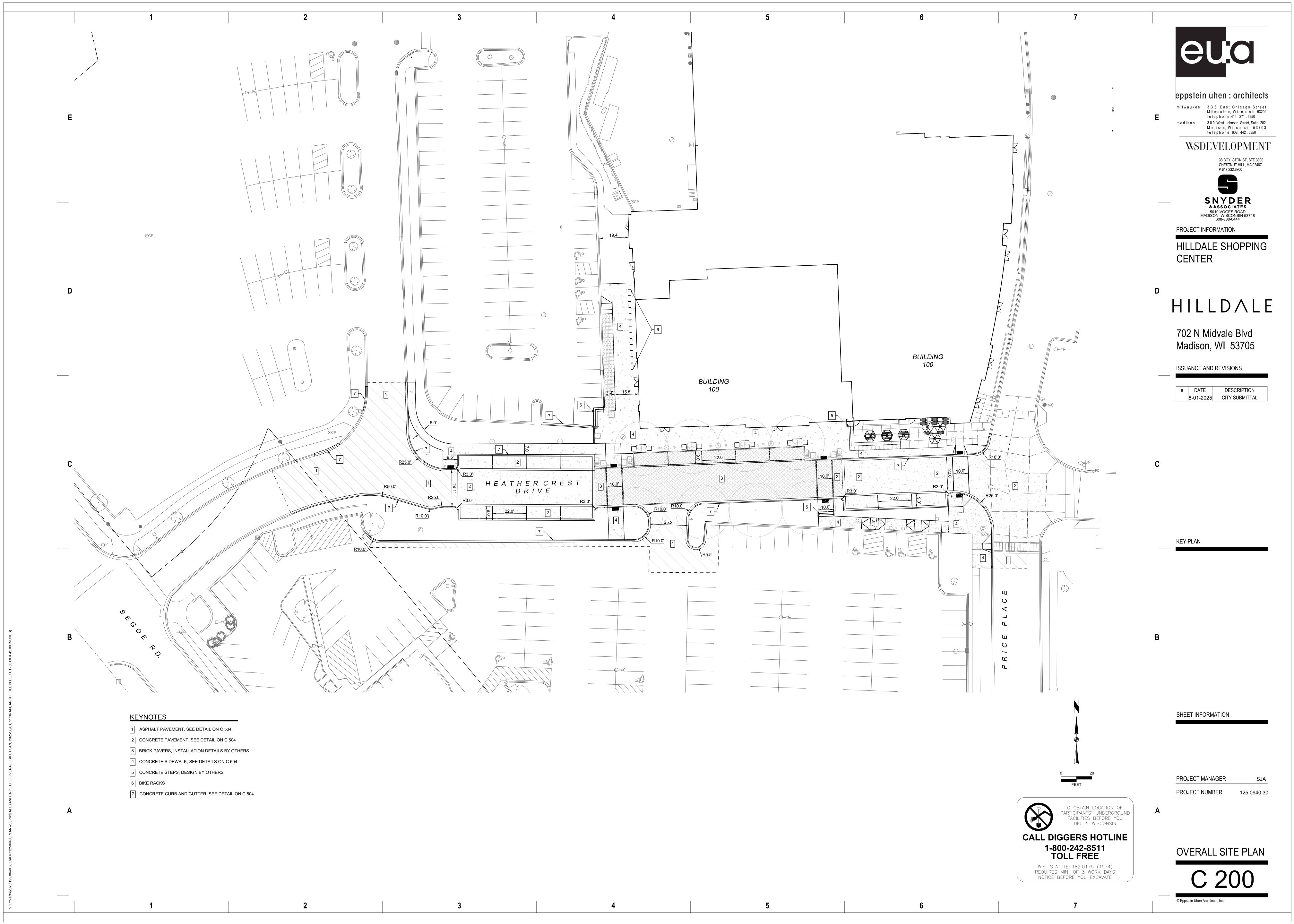
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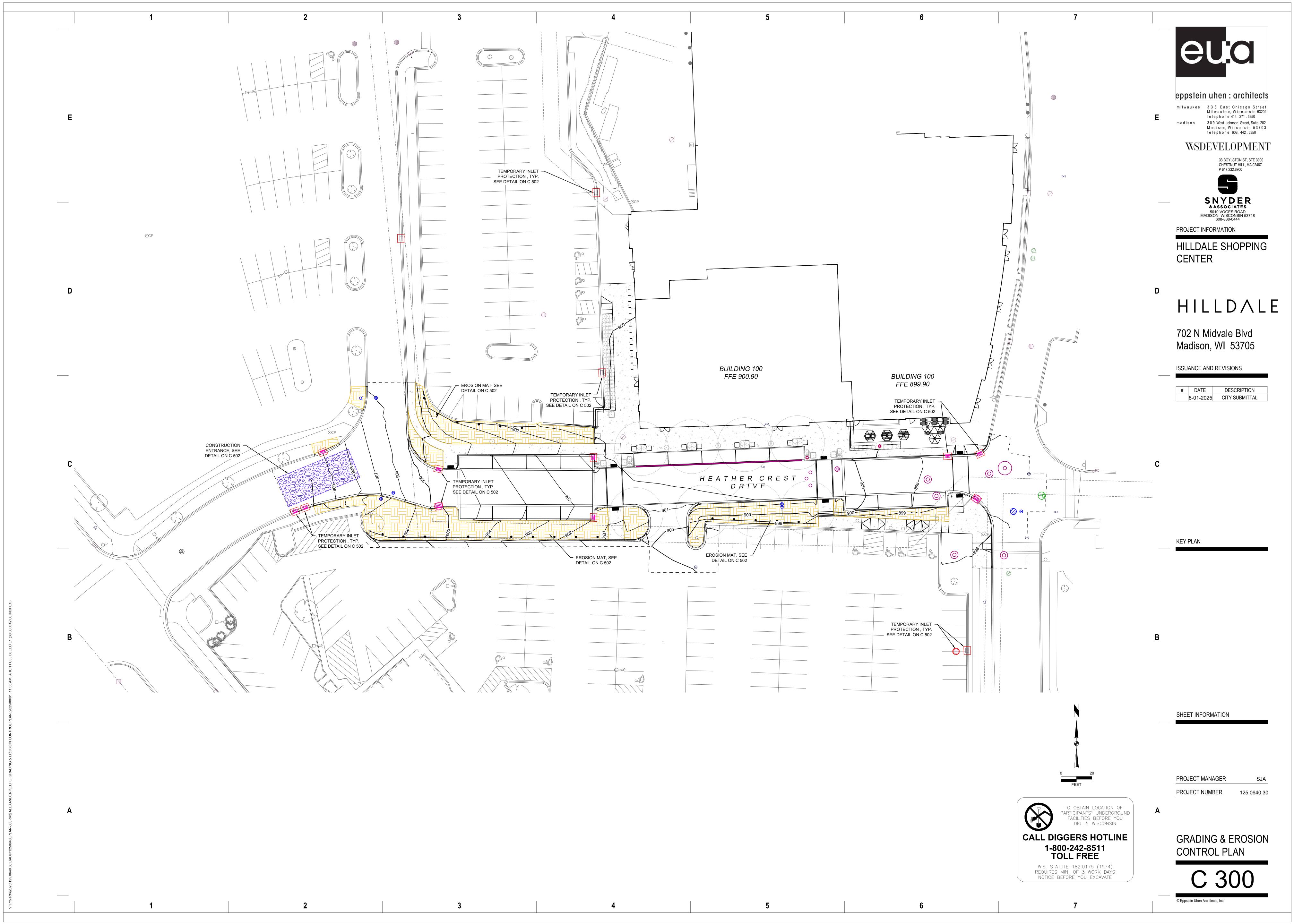
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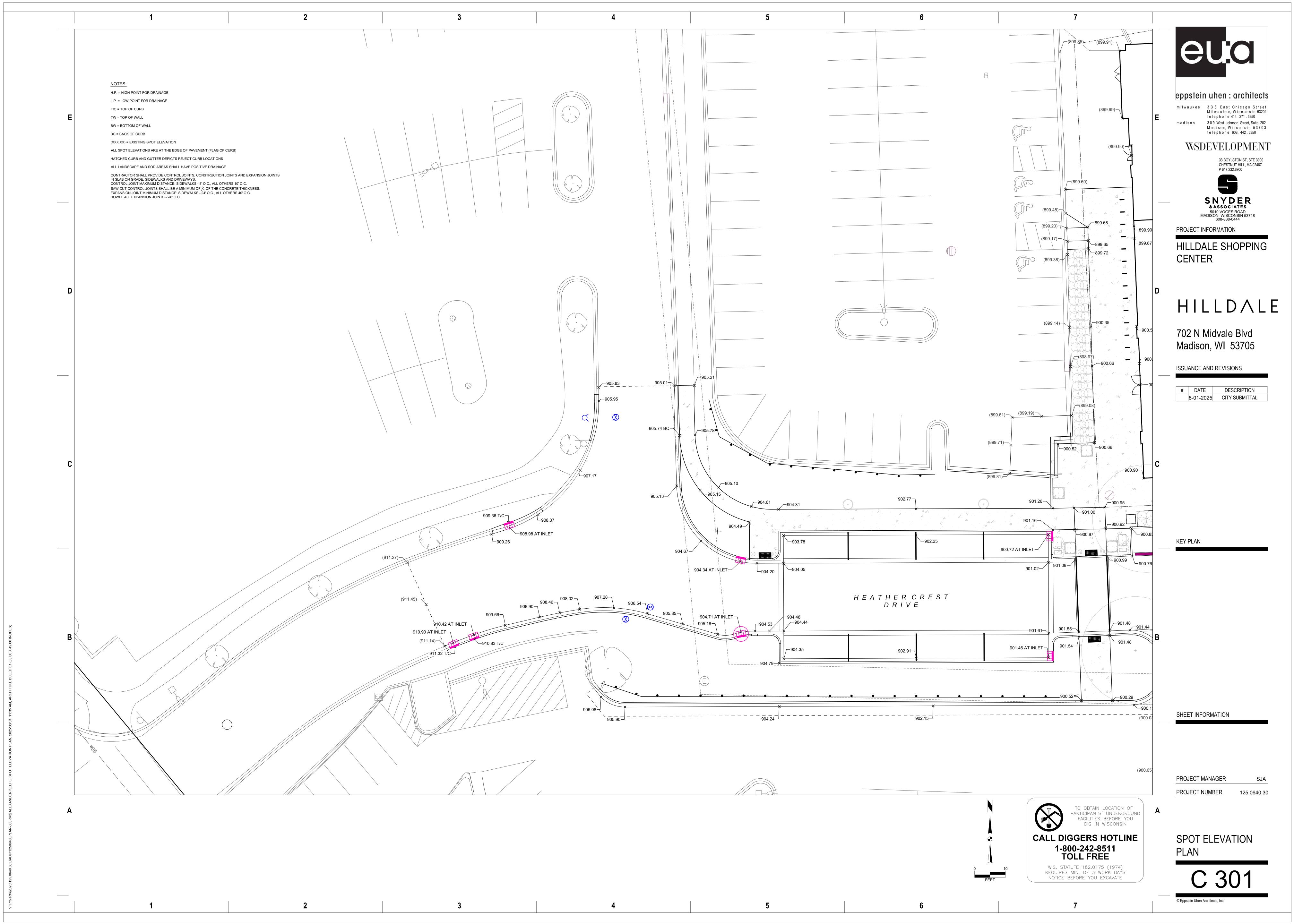
**LEGEND & NOTES** 

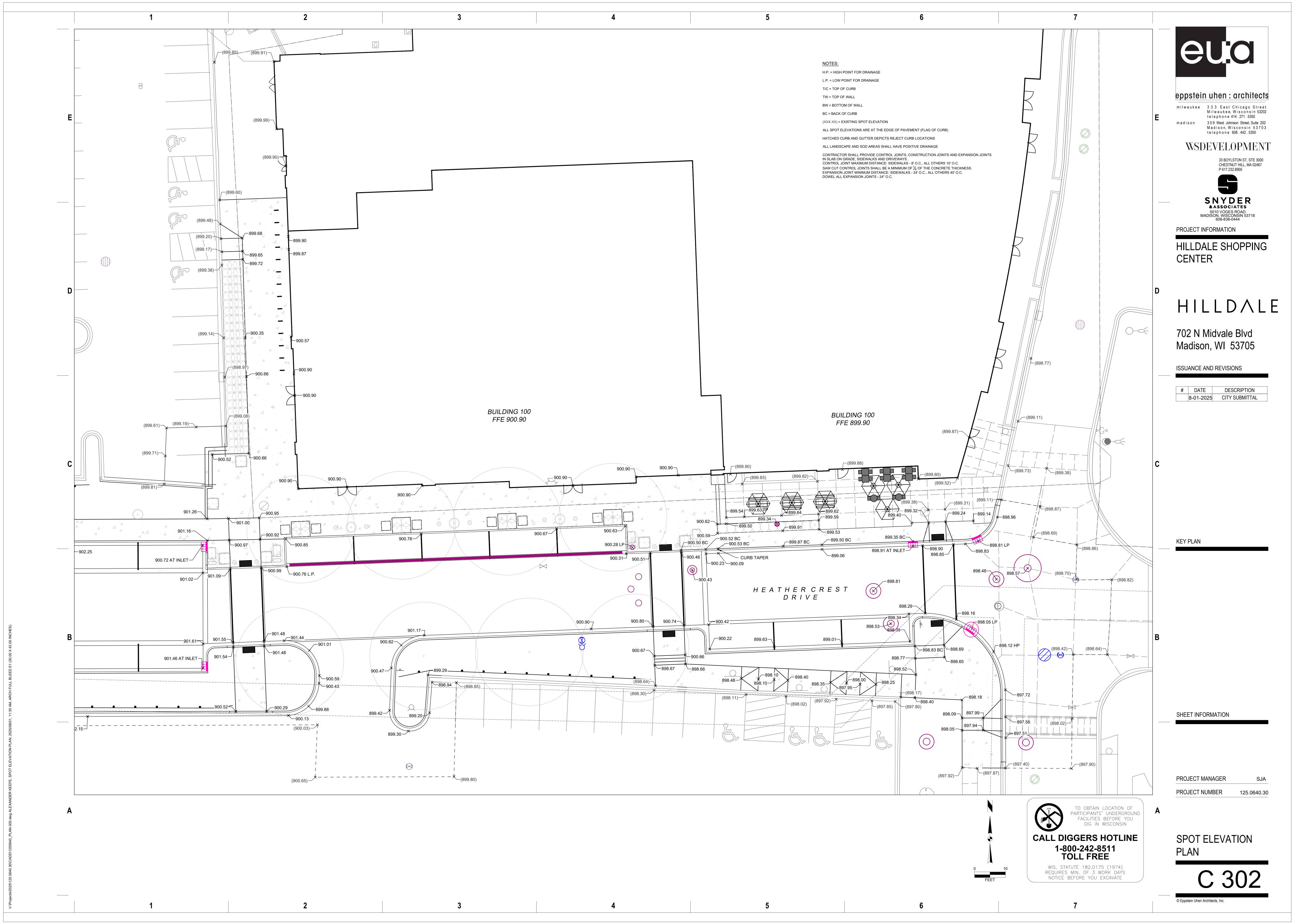
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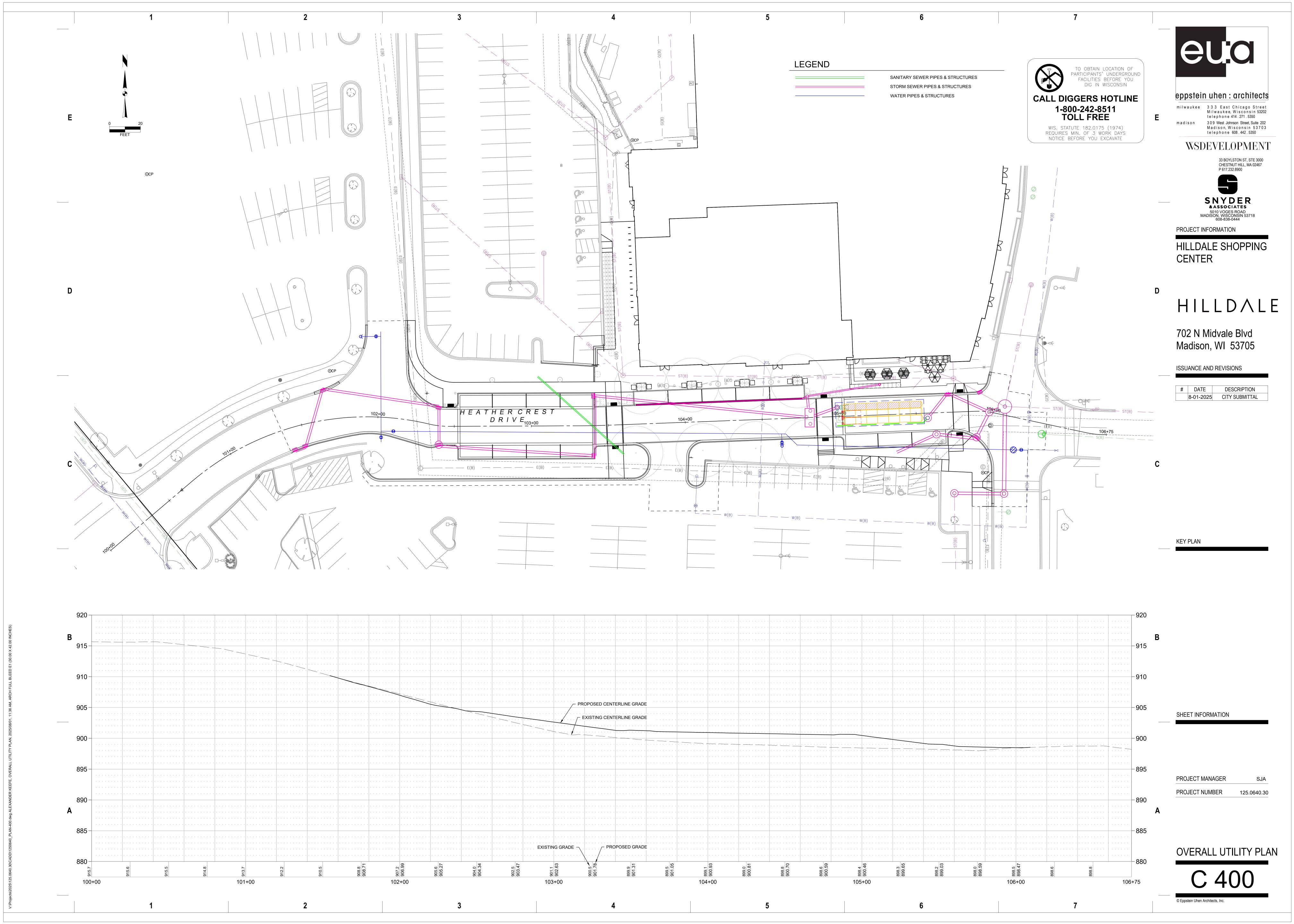


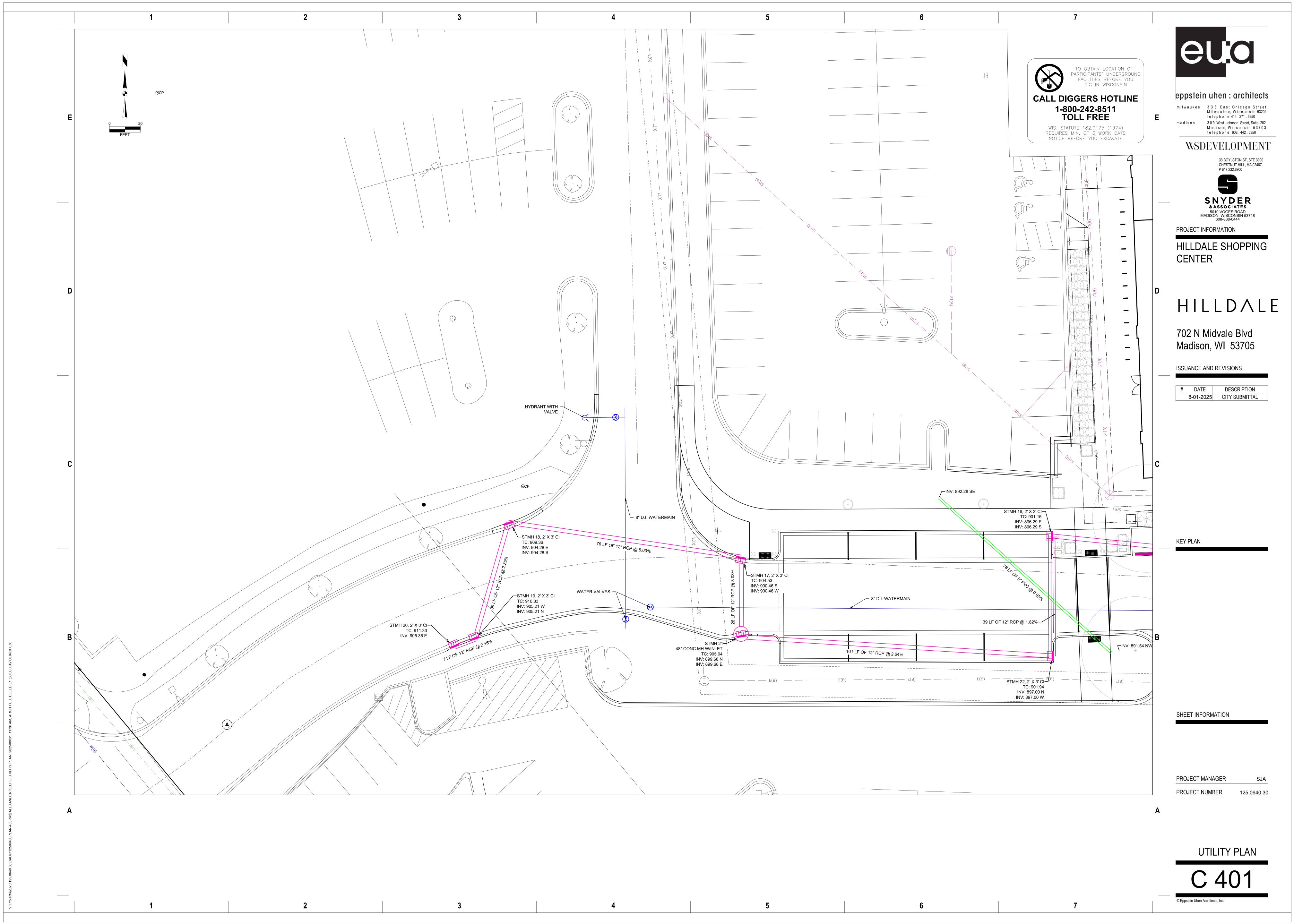


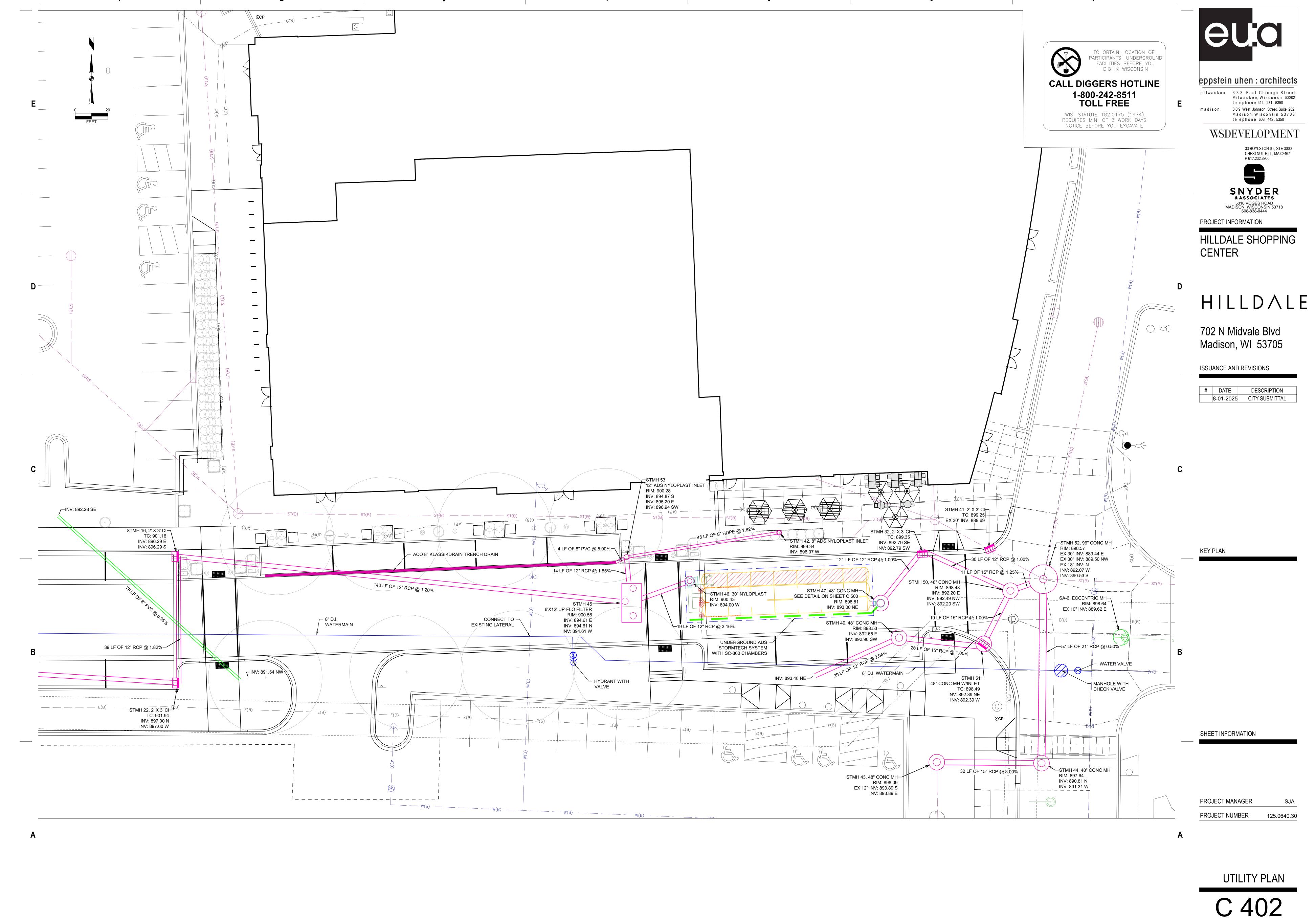




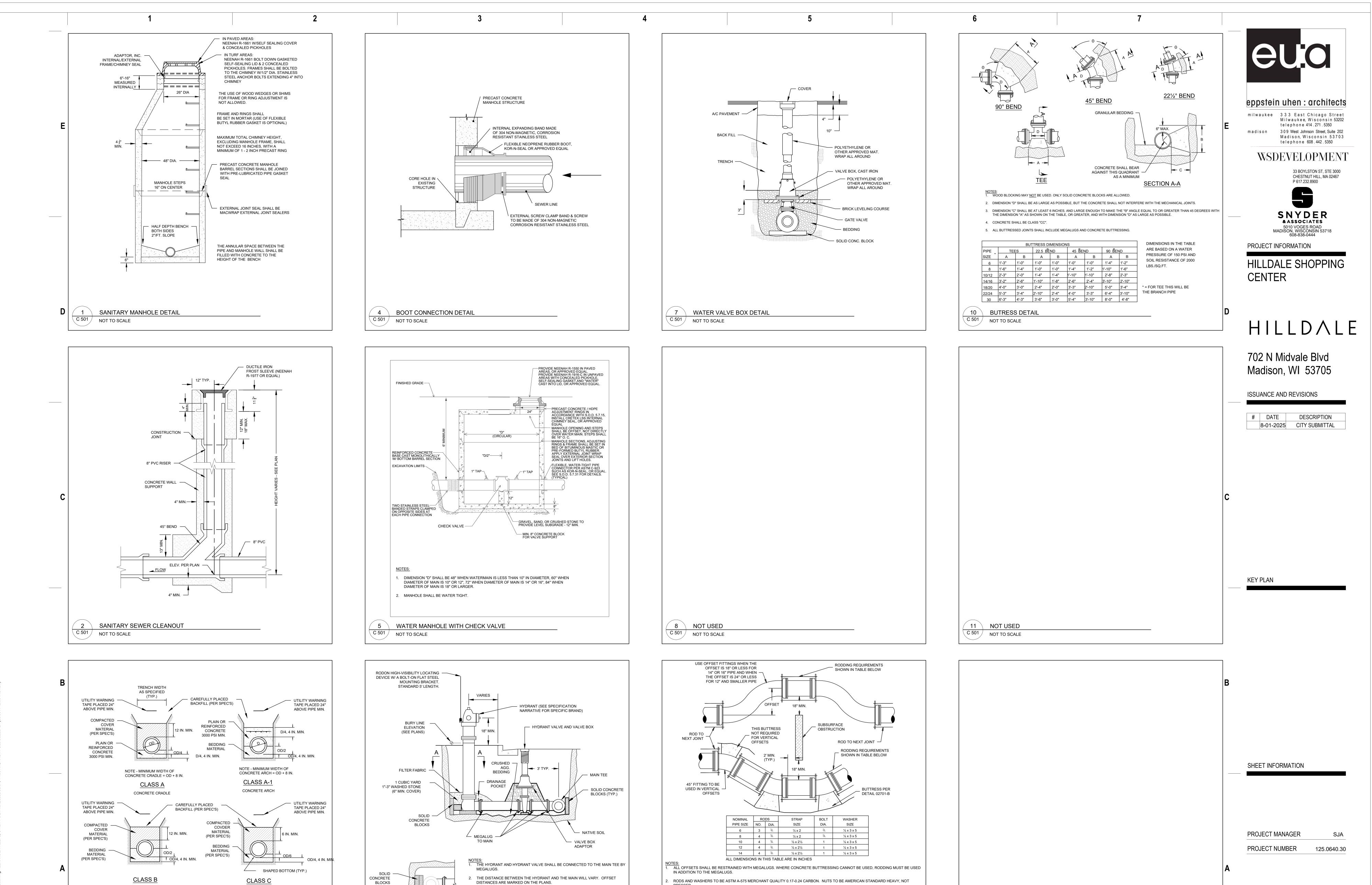








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TIE RODS, BOLTS, NUTS, BANDS AND WASHERS TO BE FURNISHED AND ASSEMBLED BY THE CONTRACTOR.

OFFSET FITTINGS REQUIRE CONTINUOUS RODDING IN ALL POSITIONS.

OFFSET & RODDING DETAIL

C 501 / NOT TO SCALE

ALL STEEL MATERIAL TO BE GALVANIZED OR BE THOROUGHLY COATED WITH ENGINEER APPROVED COATING.

VERTICAL OFFSETS SHALL NOT CREATE A HIGH POINT IN THE WATER MAIN. VERTICAL OFFSETS REQUIRE THE SAME RODDING AND

12 NOT USED

C 501 NOT TO SCALE

UTILITY DETAILS

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WHERE CONCRETE BLOCKING CANNOT BE INSTALLED, RODDING THE HYDRANT

TO THE MAIN IS REQUIRED IN ADDITION TO THE MEGALUGS. RODDING SHALL BE

IN ACCORDANCE WITH DETAIL.

LEAD TO MAIN

C 501 NOT TO SCALE

SECTION A-A

STANDARD HYDRANT DETAIL

4. VALVE BOX SHALL BE BEDDED WITH 1" CLEAR STONE

ojects/2025/125.0640.30/CADD/1250640 PLAN-500.dwg ALEXANDER KEEFE. UTILITY DETAILS. 2025/08/01. 11:36 AM. ARCH FULL BLEED E1 (3

NOTES:

C 501 NOT TO SCALE

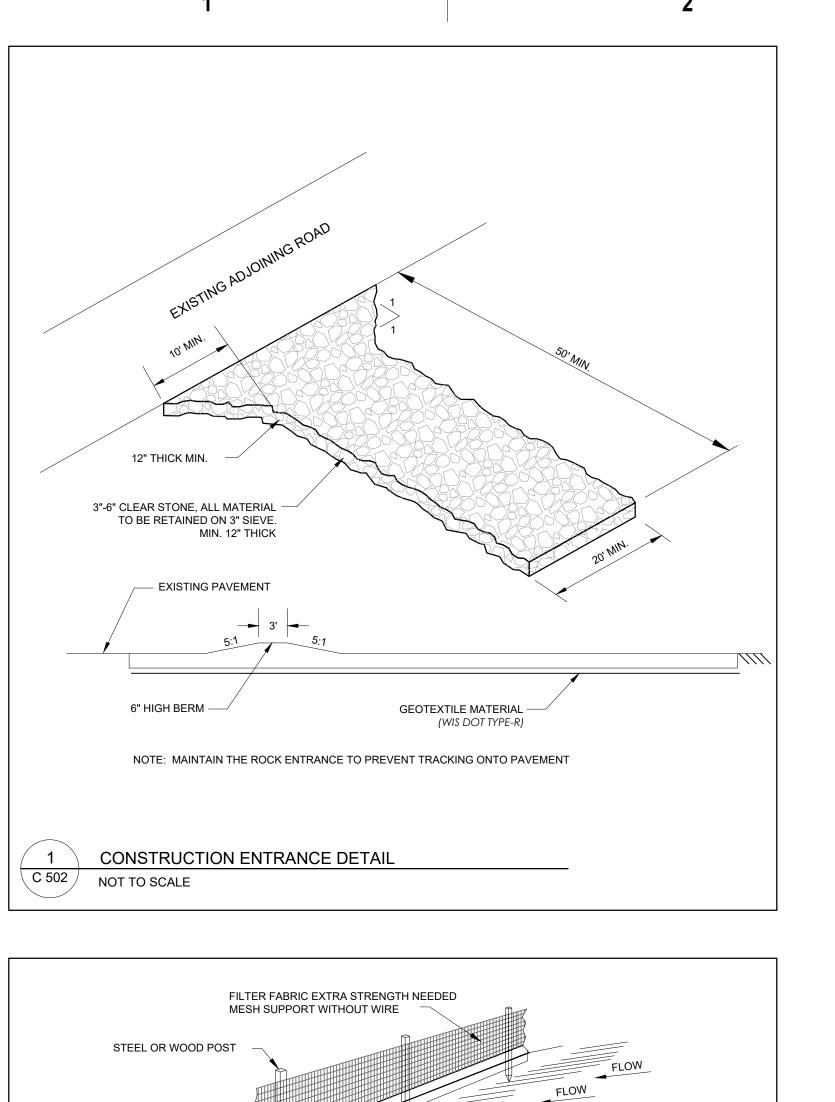
1. ALL PVC AND ABS SEWER MAINS AND LATERALS SHALL BE CLASS "B" MIN., OR AS CALLED FOR IN THE SPECIAL PROVISIONS.

2. ALL BEDDING AND COVER MATERIALS SHALL BE AS SPECIFIED AND SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

3. UNDERCUT SHALL BE IN ACCORDANCE WITH SECTION 3 OF THE STORM AND SANITARY SEWER STANDARD SPECIFICATIONS.

4. INSTALL TRACER WIRE ON ALL SANITARY AND STORM SEWER PIPE ALONG WITH WARNING TAPE IN THE TRENCHES.

SANITARY SEWER BEDDING DETAIL



10 FT MAX SPACING WITH WIRE

PONDING HT

COMPACTED

SILT FENCE B

**ROLL JOINTS** 

BACKFILL

SILT FENCE A

PONDING HT.

TRENCH WITH GRAVEL

WRAPPED AROUND

FENCE POST

SUPPORT FENCE 6 FT MAX SPACING WITHOUT WIRE

SUPPORT FENCE

FILTER FABRIC ATTACH

SIDE OF POST.

4"x6" TRENCH WITH

COMPACTED **BACKFILL** 

1. INSPECT FENCE WEEKLY AND AFTER EACH RAIN EVENT OF 0.5"

2. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT

WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE

3. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO

ACCORDANCE WITH WDNR TECHNICAL STANDARD 1056.

4. SILT FENCE SHALL BE INSTALLED AND MAINTAINED IN

\*FLOW RATINGS SHOWN ARE 50% MAXIMIUM

FOR PROLONGED PRODUCT LIFE.

MAY REQUIRE ADDITIONAL REVIEW.

CASTING OR CONCRETE STRUCTURE

3 \ INLET PROTECTION DETAIL

C 502 NOT TO SCALE

WWW.INLETFILTERS.COM

INSTALLATION:

REMOVE GRATE

DIMENSIONAL FORMS MUST BE PROVIDED.

1. ALL FRAMING IS CONSTRUCTED OF CORROSION RESISTANT STEEL FRAMING

3. UPON ORDERING THE ADS P/N CONFIRMATION OF THE DOT CALLOUT,

FLEXSTORM ITEM CODE, CASTING MAKE AND MODEL, OR DETAILED

4. FOR WRITTEN SPECIFICATIONS AND MAINTENANCE GUIDELINES VISIT

2. DROP FLEXSTORM INLET FILTER ONTO LOAD BEARING LIP OF

2. TOTAL BYPASS CAPACITY WILL VARY WITH EACH SIZED DRAINAGE STRUCTURE. FLEXSTORM DESIGNS FRAMING BYPASS TO MEET OR EXCEED THE DESIGN FLOW OF THE PARTICULAR DRAINAGE STRUCTURE. CONCRETE STRUCUTRES

NECESSARY OR WHEN SEDIMENT REACHES ½ OF FENCE HEIGHT.

AND REPAIR IF REQUIRED. REMOVE SEDIMENT WHEN

STANDARD DETAIL

PERMANENTLY STABILIZED.

MAXIMIZE PONDING EFFICIENCY

2 SILT FENCE DETAIL

NOT TO SCALE

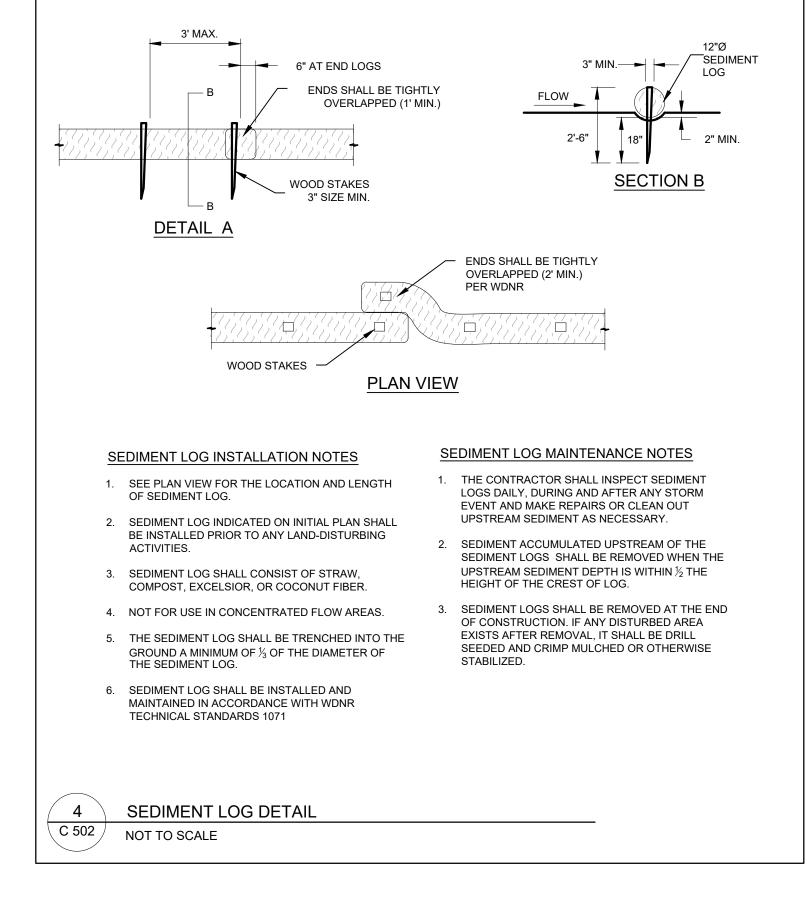
TRENCH WITH NATIVE BACKFILL

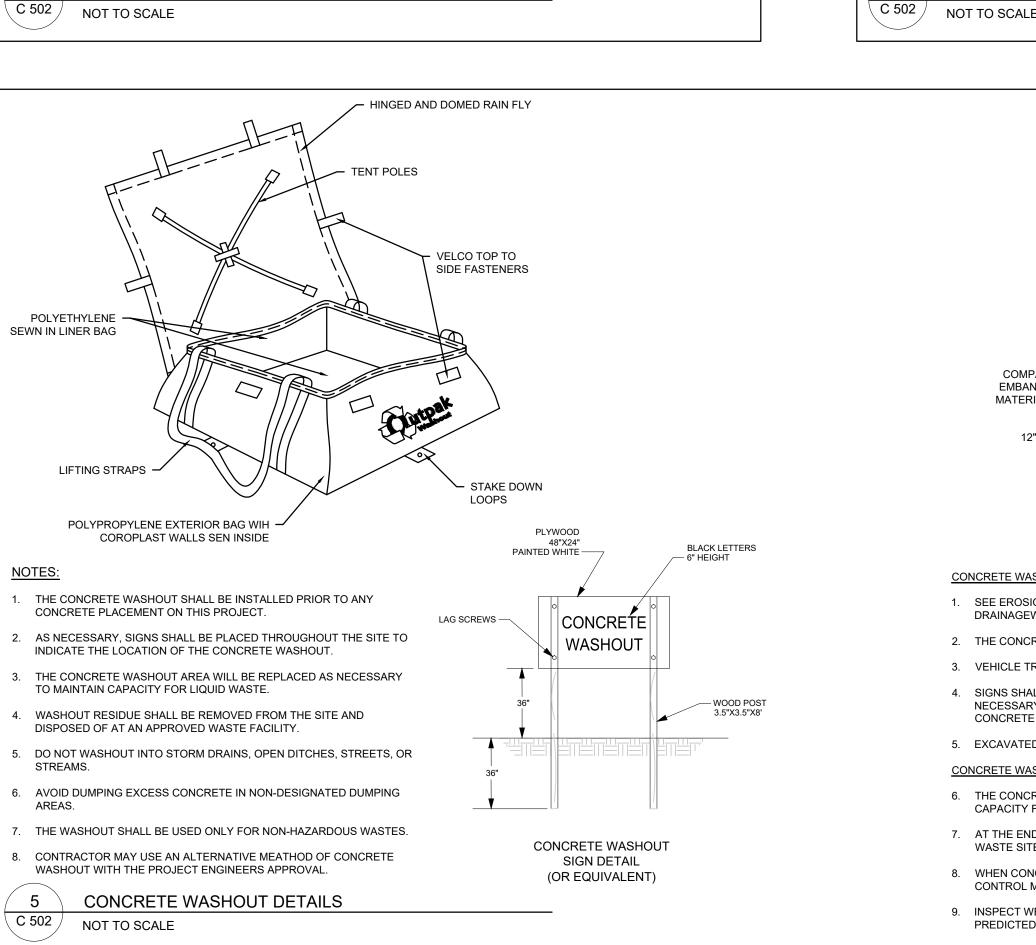
SECURELY TO UPSTREAM

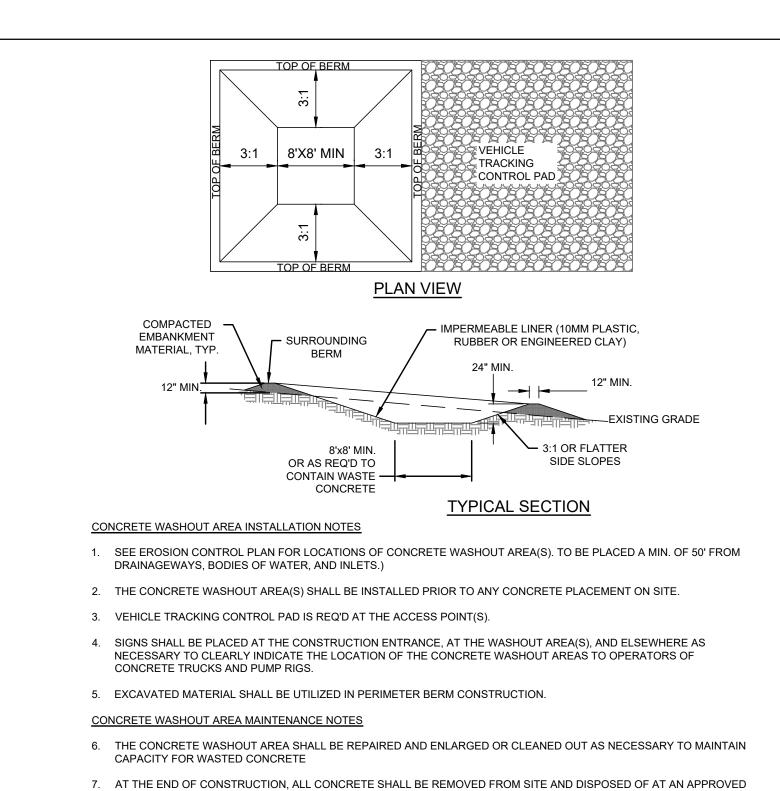
STEEL OR

HIGH MAX

WOOD POST 36" —







8. WHEN CONCRETE WASHOUT AREA(S) IS REMOVED, THE DISTURBED AREA SHALL BE STABILIZED PER SITE EROSION

9. INSPECT WEEKLY AND DURING AND AFTER ALL STORM EVENTS. CLEAN-OUT OR COVER WASHOUT AREA PRIOR TO

REFER TO GENERAL STAPLE PATTERN GUIDE FOR CORRECT STAPLE

PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF FERTILIZER AND SEED.

THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2" OVERLAP.

APPROXIMATELY 4" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART.

NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH

BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN 6" DEEP X 6" WIDE TRENCH. BACKFILL AND

WHEN BLANKETS MUST BE SPLICED DOWN THE SLOPE, PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH

EROSION MAT SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH WDNR TECHNICAL STANDARD # 1052.

ALL BLANKETS MUST BE SECURELY FASTENED TO THE SLOPE BY PLACING STAPLES/STAKES IN APPROPRIATE

PATTERN RECOMMENDATIONS FOR SLOPE INSTALLATIONS.

INSTALLATION:

PAPER SIDE DOWN.

ROLL THE BLANKETS

(A.) DOWN THE SLOPE

COMPACT THE TRENCH AFTER STAPLING.

(B.) HORIZONTALLY ACROSS THE SLOPE

WASTE SITE.

PREDICTED STORM EVENTS TO PREVENT OVER-FLOW.

LOCATIONS AS RECOMMENDED BY THE MANUFACTURER.

**EROSION CONTROL MAT - SLOPE INSTALLATION** 

# **EROSION CONTROL NOTES**

- 1. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING COPIES OF ALL PERMITS, INCLUDING WISDNR WPDES DISCHARGE PERMIT (IF APPLICABLE), COUNTY AND LOCAL EROSION CONTROL PERMIT. CONTRACTOR IS RESPONSIBLE FOR ABIDING BY ALL PERMIT REQUIREMENTS AND RESTRICTIONS.
- 2. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO LAND DISTURBING ACTIVITIES.
- 3. ALL INSTALLATION AND MAINTENANCE OF EROSION CONTROL PRACTICES SHALL BE IN ACCORDANCE WITH THE APPLICABLE WISCONSIN DEPARTMENT OF NATURAL RESOURCES (WDNR) TECHNICAL STANDARD, FOUND AT: http://dnr.wi.gov/topic/stormwater/standards/const\_standards.html OR THÉ WISCONSIN CONSTRUCTION SITE
- BEST MANAGEMENT PRACTICE HANDBOOK IF A TECHNICAL STANDARD IS NOT AVAILABLE. 4. ALL EROSION CONTROL FACILITIES SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT AND
- WARRANTY PERIOD IN CONFORMANCE WITH ALL APPLICABLE PERMITS ISSUED FOR THE PROJECT.
- 5. ALL EROSION AND SEDIMENTATION CONTROL PRACTICES SHALL BE INSPECTED WEEKLY AND WITHIN 24 HOURS AFTER EVERY PRECIPITATION EVENT THAT PRODUCES 0.5 INCHES OF RAIN OR MORE DURING A 24 HOUR
- PERIOD. REPAIRS SHALL BE MADE IMMEDIATELY TO EROSION CONTROL PRACTICES AS NECESSARY. 6. TEMPORARY STOCKPILES SHALL BE STABILIZED IF NOT REMOVED IN 10 DAYS. PERIMETER CONTROL ON THE
- DOWNHILL SIDE SHALL BE IN PLACE AT ALL TIMES (SILT FENCE OR APPROVED EQUAL). 7. TEMPORARY SEED MIXTURE SHALL CONFORM TO 630.2.1.5.1.4 OF THE WISDOT STANDARD SPECIFICATIONS USE
- 8. DISTURBED AREAS THAT CANNOT BE STABILIZED WITH A DENSE GROWTH OF VEGETATION BY SEEDING AND MULCHING DUE TO TEMPERATURE OR TIMING OF CONSTRUCTION, SHALL BE STABILIZED BY APPLYING ANIONIC

WINTER WHEAT OR RYE FOR FALL PLANTINGS STARTED AFTER SEPTEMBER 1.

POLYACRYLAMIDE (PAM) IN ACCORDANCE WITH WDNR TECHNICAL STANDARD 1050. 9. SEDIMENT SHALL BE REMOVED FROM THE SEDIMENT BASINS TO MAINTAIN A THREE FOOT DEPTH OF TREATMENT, MEASURED BELOW THE NORMAL WATER ELEVATION. SEDIMENT WILL BE REMOVED FROM

THE DIVERSION DITCHES WHEN IT REACHES HALF THE HEIGHT OF THE DITCH. SEDIMENT WILL BE

10. ALL WATER FROM CONSTRUCTION DEWATERING SHALL BE TREATED IN ACCORDANCE WITH WDNR TECHNICAL STANDARD 1061 PRIOR TO DISCHARGE TO WATERS OF THE STATE, WETLANDS, OR OFFSITE.

FENCE/BALE THE SILT FENCE AND DITCH CHECKS SHALL BE REPAIRED AS NECESSARY TO MAINTAIN A BARRIER.

REMOVED FROM BEHIND THE SILT FENCE AND DITCH CHECKS WHEN IT REACHES HALF THE HEIGHT OF THE

- 11. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION. ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED. DEPENDING ON HOW THE CONTRACTOR GRADES THE SITE, IT MAY BE NECESSARY TO INSTALL TEMPORARY EROSION CONTROL AND/OR SEDIMENT TRAPS IN VARIOUS LOCATIONS THROUGHOUT THE PROJECT. TEMPORARY SEDIMENT TRAPS SHALL BE DESIGNED, INSTALLED, AND MAINTAINED IN ACCORDANCE WITH WDNR
- TECHNICAL STANDARD 1063. 12. TRACKED MATERIAL TO ADJACENT STREETS SHALL BE COLLECTED AT THE END OF EACH WORKING DAY OR AS
- REQUIRED BY THE LOCAL MUNICIPALITY.
- 13. DUST CONTROL SHALL BE PROVIDED AS NECESSARY IN ACCORDANCE WITH WDNR TECHNICAL STANDARD 106B. 14. FINAL STABILIZATION OF LANDSCAPED AREAS SHALL BE IN ACCORDANCE WITH THE APPROVED LANDSCAPE PLAN.
- 15. ALL SEEDED AREAS WILL BE FERTILIZED, RESEEDED AS NECESSARY, AND MULCHED ACCORDING TO SPECIFICATIONS IN THE APPROVED LANDSCAPE PLAN TO MAINTAIN A VIGOROUS DENSE VEGETATIVE COVER.
- 16. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL EROSION CONTROL FACILITIES AND MEASURES NECESSARY TO CONTROL EROSION AND SEDIMENTATION AT THE PROJECT SITE. THESE FACILITIES AND MEASURES MAY OR MAY NOT BE SHOWN ON THE DRAWINGS AND THEIR ABSENCE ON THE DRAWINGS DOES NOT
- DRAWINGS ARE THE MINIMUM ACTIONS REQUIRED. ERODED MATERIAL THAT HAS LEFT THE CONSTRUCTION SITE SHALL BE COLLECTED AND RETURNED TO THE SITE

ALLEVIATE THE CONTRACTOR FROM PROVIDING THEM. ANY MEASURES AND FACILITIES SHOWN ON THE

- 18. AFTER FINAL VEGETATION IS ESTABLISHED, REMOVE ALL EROSION CONTROL FACILITIES. RESTORE AREAS
- DISTURBED BY THE REMOVALS.
- 19. KEEP A COPY OF THE CURRENT EROSION CONTROL PLAN ON SITE THROUGHOUT THE DURATION OF THE PROJECT.
- 20. COMPLETE AND STABILIZE SEDIMENT BASINS/TRAPS PRIOR TO MASS LAND DISTURBANCE TO CONTROL RUNOFF DURING CONSTRUCTION. REMOVE SEDIMENT AS NEEDED TO MAINTAIN 3 FEET OF DEPTH TO THE OUTLET, AND PROPERLY DISPOSE OF SEDIMENT REMOVED DURING MAINTENANCE. CONSTRUCT AND MAINTAIN THE SEDIMENT BASIN PER WDNR TECHNICAL STANDARDS.
- 21. PROPERLY DISPOSE OF ALL WASTE AND UNUSED BUILDING MATERIALS (INCLUDING GARBAGE, DEBRIS, CLEANING WASTES, OR OTHER CONSTRUCTION MATERIALS) AND DO NOT ALLOW THESE MATERIALS TO BE CARRIED BY RUNOFF INTO THE RECEIVING CHANNEL.
- MAKE PROVISIONS FOR WATERING DURING THE FIRST 8 WEEKS FOLLOWING SEEDING OR PLANTING OF DISTURBED AREAS WHENEVER MORE THAN 7 CONSECUTIVE DAYS OF DRY WEATHER OCCUR.

ESTIMATED PRELIMINARY EROSION CONTROL QUANTITIES (ACTUAL QUANTITIES SUBJECT TO CHANGE)						
ITEM	QUANTITY					
ROCK CONSTRUCTION ENTRANCE - TEMP	1					
EROSION MAT - PERMANENT	0 S.Y.					
SILT FENCE - TEMP	0 L.F.					
INLET PROTECTION, TEMPORARY	0 EA.					
CONCRETE CLEAN OUT - TEMP	1 EA.					

QUANTITIES FOR REPAIR AND REPLACEMENT OF EROSION CONTROL DEVICES

THROUGHOUT ALL PHASES OF THE PROJECTS CONSTRUCTION.



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MADISON, WISCONSIN 53718

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PROJECT INFORMATION

HILLDALE SHOPPING

 $HILLD\Lambda LE$ 

702 N Midvale Blvd Madison, WI 53705

ISSUANCE AND REVISIONS

# DATE DESCRIPTION 8-01-2025 CITY SUBMITTAL

KEY PLAN

SHEET INFORMATION

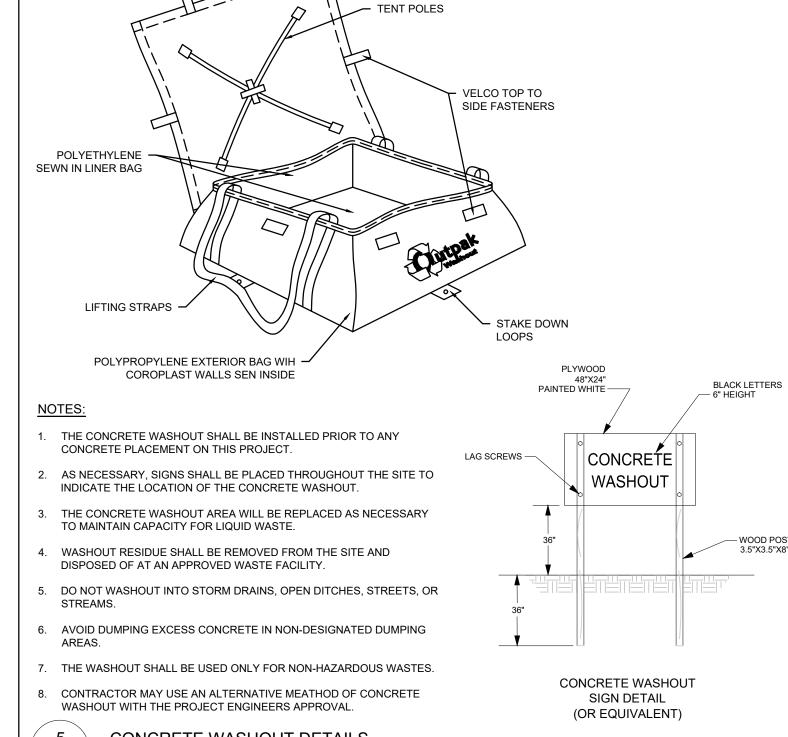
PROJECT MANAGER

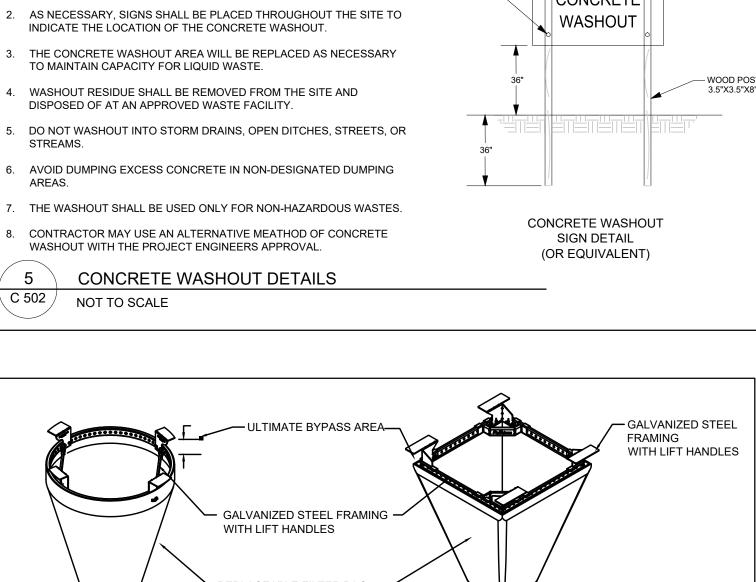
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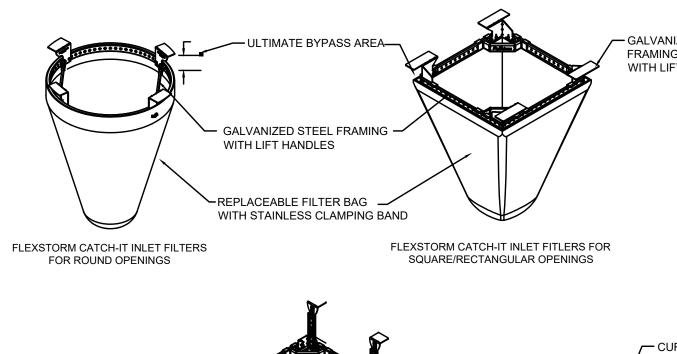
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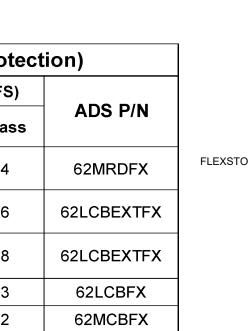
**EROSION CONTROL** NOTES & DETAILS

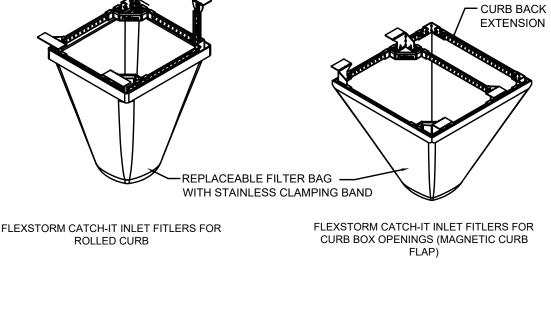
SEV	POLYETHYLENE VN IN LINER BAG  LIFTING STRAPS	VELCO TOP TO SIDE FASTENERS
	POLYPROPYLENE EXTERIOR BAG WIH COROPLAST WALLS SEN INSIDE	LOOPS  PLYWOOD  48"X24"  PAINTED WHITE
<u>NC</u>	<u>otes:</u>	
	THE CONCRETE WASHOUT SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT ON THIS PROJECT.  AS NECESSARY, SIGNS SHALL BE PLACED THROUGHOUT THE SITE TO	LAG SCREWS CONCRETE
۷.	INDICATE THE LOCATION OF THE CONCRETE WASHOUT.	WASHOUT
3.	THE CONCRETE WASHOUT AREA WILL BE REPLACED AS NECESSARY TO MAINTAIN CAPACITY FOR LIQUID WASTE.	36"
4.	WASHOUT RESIDUE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT AN APPROVED WASTE FACILITY.	
5.	DO NOT WASHOUT INTO STORM DRAINS, OPEN DITCHES, STREETS, OR STREAMS.	36"
6.	AVOID DUMPING EXCESS CONCRETE IN NON-DESIGNATED DUMPING AREAS.	
7.	THE WASHOUT SHALL BE USED ONLY FOR NON-HAZARDOUS WASTES.	001107577 11110117
8.	CONTRACTOR MAY USE AN ALTERNATIVE MEATHOD OF CONCRETE WASHOUT WITH THE PROJECT ENGINEERS APPROVAL.	CONCRETE WASHOUT SIGN DETAIL (OR EQUIVALENT)
	5 CONCRETE WASHOUT DETAILS	

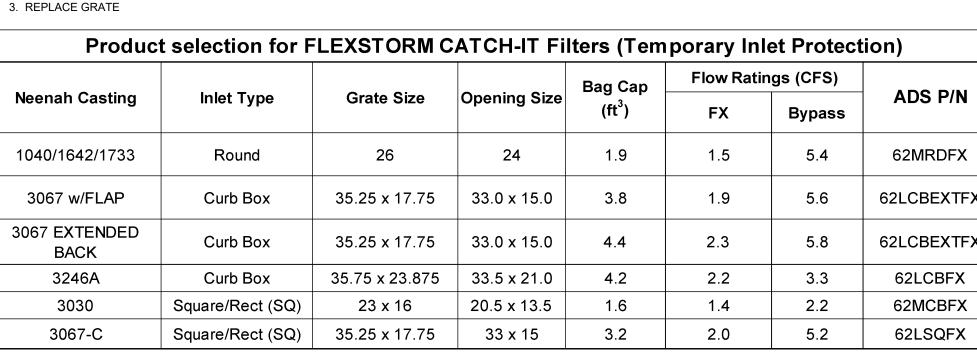






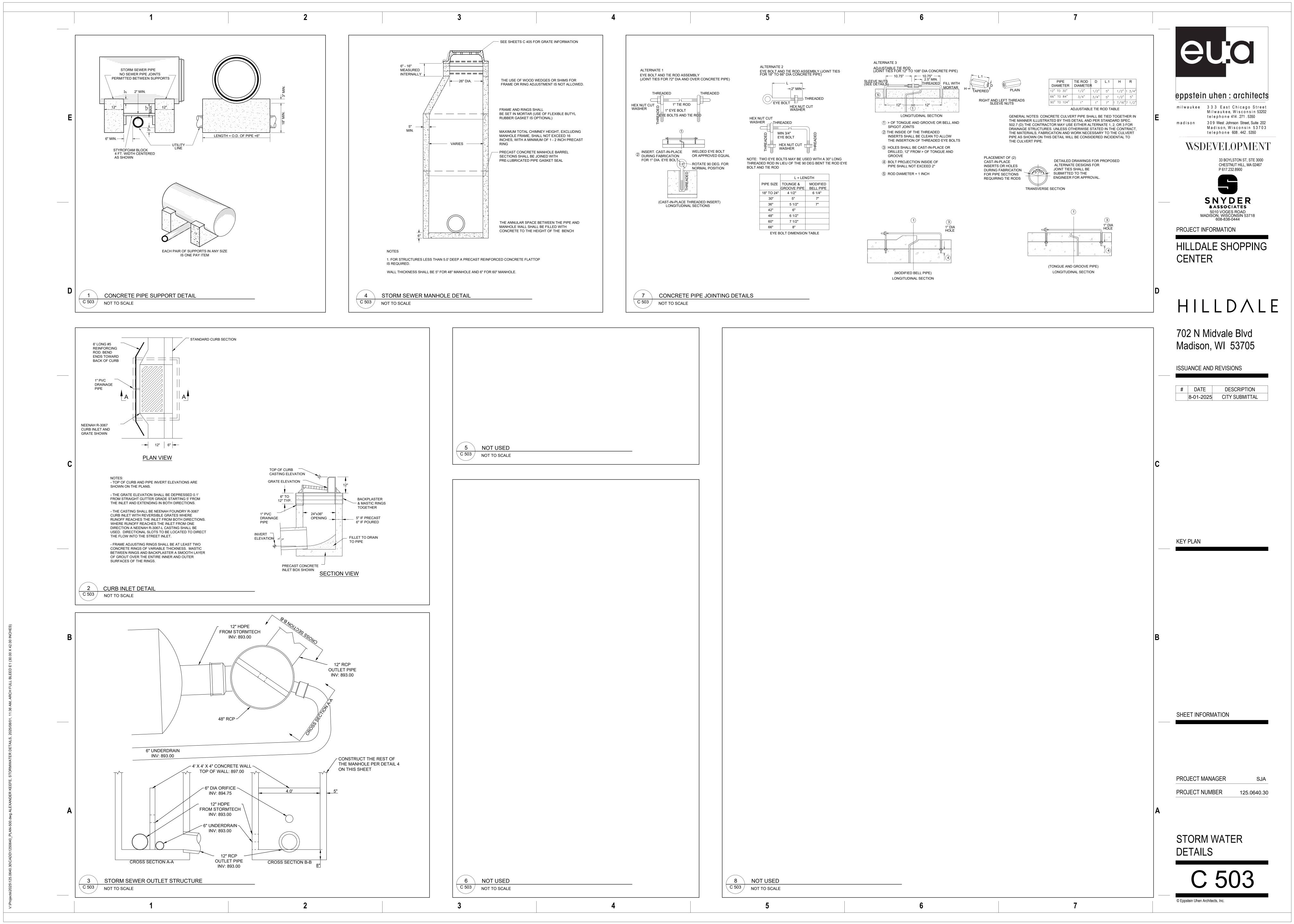


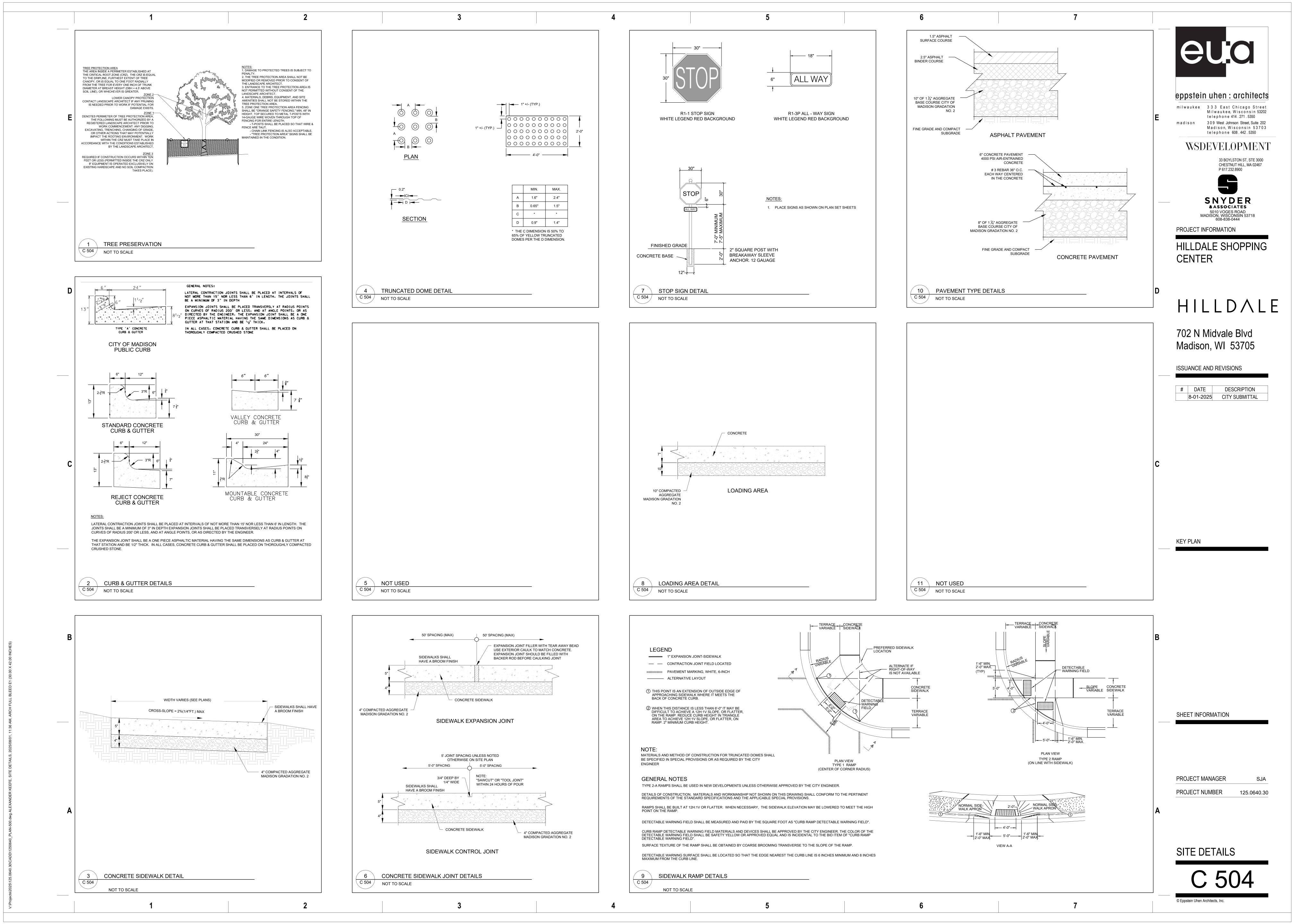




NOT USED C 502 NOT TO SCALE

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PROJECT INFORMATION							
ENGINEERED PRODUCT MANAGER							
ADS SALES REP							
PROJECT NO.							







# HILLDALE PHASE 2 REVISED

# MADISON, WI, USA

# SC-800 STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH SC-800.
- CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
- CHAMBERS SHALL BE DESIGNED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
  - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
  - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2"
  - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 750 LBS/FT/%. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
  - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
  - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
  - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.
- MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECH NOTE #6.32 FOR MANIFOLD SIZING GUIDANCE. DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
- ADS DOES NOT DESIGN OR PROVIDE MEMBRANE LINER SYSTEMS. TO MINIMIZE THE LEAKAGE POTENTIAL OF LINER SYSTEMS, THE MEMBRANE LINER SYSTEM SHOULD BE DESIGNED BY A KNOWLEDGEABLE GEOTEXTILE PROFESSIONAL AND INSTALLED BY A QUALIFIED CONTRACTOR.

# IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-800 SYSTEM

- STORMTECH SC-800 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
- STORMTECH SC-800 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION
- CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
  - STONESHOOTER LOCATED OFF THE CHAMBER BED.
  - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
  - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
- 4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
- MAINTAIN MINIMUM 3" (75 mm) SPACING BETWEEN THE CHAMBER ROWS.
- EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE; AASHTO M43 #3, 357, 4, 467 5 56 OR 57
- THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN
- ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

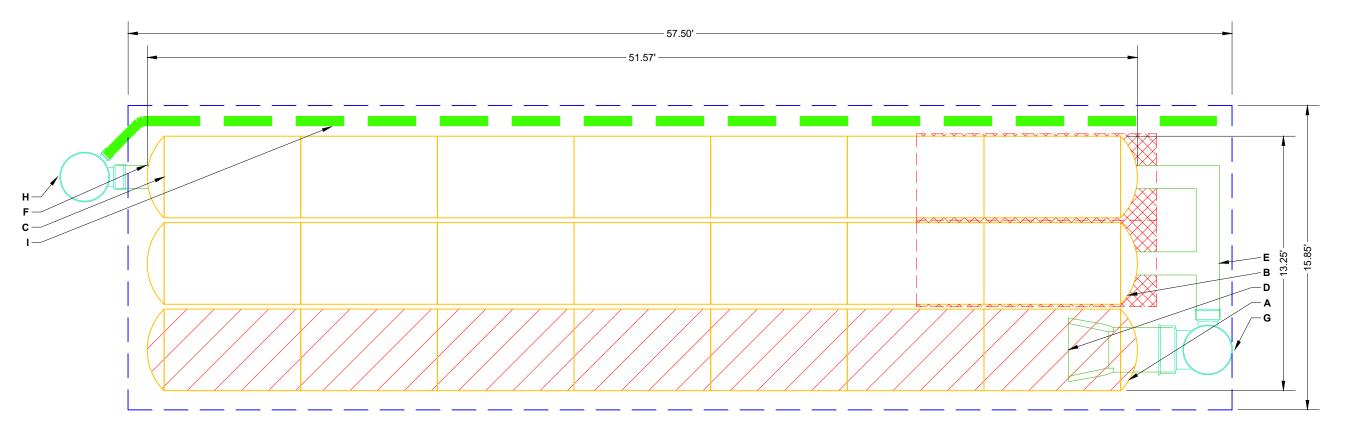
## NOTES FOR CONSTRUCTION EQUIPMENT

- STORMTECH SC-800 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION GUIDE"
- THE USE OF CONSTRUCTION EQUIPMENT OVER SC-800 CHAMBERS IS LIMITED:
  - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
  - NO RUBBER TIRED LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION GUIDE"
  - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION GUIDE".
- FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD, ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY

CONTACT STORMTECH AT 1-800-821-6710 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

PROPOSED LAYOUT	PROPOSED ELEVATIONS					ABOVE BAS	SE OF CHAMBER	
	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):	905.00	PART TYPE	ITEM OI	DESCRIPTION	INVERT <sup>9</sup>	MAX FLOW	
STORMTECH SC-800 END CAPS	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC): MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):	898 75	PREFABRICATED EZ END CAP	A	24" BOTTOM PREFABRICATED EZ END CAP, PART#: SC800ECEZ / TYP OF ALL 24" BOTTOM	2.30"		1
STONE BELOW (in)	MINIMUM ALLOWABLE GRADE (TOP OF RIGID CONCRETE PAVEMENT): MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):	898.25 898.25	PRE-CORED END CAP	В	CONNECTIONS AND ISOLATOR PLUS ROWS  12" TOP PRE-CORED END CAP, PART#: SC800EPE12TPC / TYP OF ALL 12" TOP CONNECTIONS			-
INSTALLED SYSTEM VOLUME (CF)	TOP OF STONE:	897.50	PRE-CORED END CAP	С	12" BOTTOM PRE-CORED END CAP, PART#: SC800EPE12BPC / TYP OF ALL 12" BOTTOM CONNECTIONS	1.60"		1
(COVER STONE INCLUDED)	TOP OF SC-800 CHAMBER: 12" x 12" TOP MANIFOLD INVERT:	897.00 895.45	FLAMP	D	INSTALL FLAMP ON 24" ACCESS PIPE / PART#: SC80024RAMP	11.10		1
	24" ISOLATOR ROW PLUS INVERT: 12" BOTTOM CONNECTION INVERT:	894.44 894.38 F	MANIFOLD PIPE CONNECTION	E   F	12" x 12" TOP MANIFOLD, ADS N-12 12" BOTTOM CONNECTION	14.40" 1.60"		
7 SYSTEM PERIMÈTÉR (ft)	BOTTOM OF SC-800 CHAMBER: JNDERDRAIN INVERT:	894.25	NYLOPLAST (INLET W/ ISO PLUS ROW)	G	30" DIAMETER (24.00" SUMP MIN)		4.6 CFS IN	
	BOTTOM OF STONE:	893.00	NYLOPLAST (OUTLET)	Н	30" DIAMETER (DESIGN BY ENGINEER)		2.0 CFS OUT	
		Ľ	UNDERDRAIN	'	6" ADS N-12 DUAL WALL PERFORATED HDPE UNDERDRAIN	ı	1	
								D



ISOLATOR ROW PLUS (SEE DETAIL)

PLACE MINIMUM 12.50' OF ADSPLUS625 WOVEN GEOTEXTILE OVER BEDDING STONE AND UNDERNEATH CHAMBER FEET FOR SCOUR PROTECTION AT ALL CHAMBER INLET ROWS

---- BED LIMITS

NOTES

THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.

NOT FOR CONSTRUCTION: THIS LAYOUT IS FOR DIMENSIONAL PURPOSES ONLY TO PROVE CONCEPT & THE REQUIRED STORAGE VOLUME CAN BE ACHIEVED ON SITE.

**StormTech**Chamber System 4640 TRUEMAN BLVD HILLIARD, OH 43026 1-800-733-7473

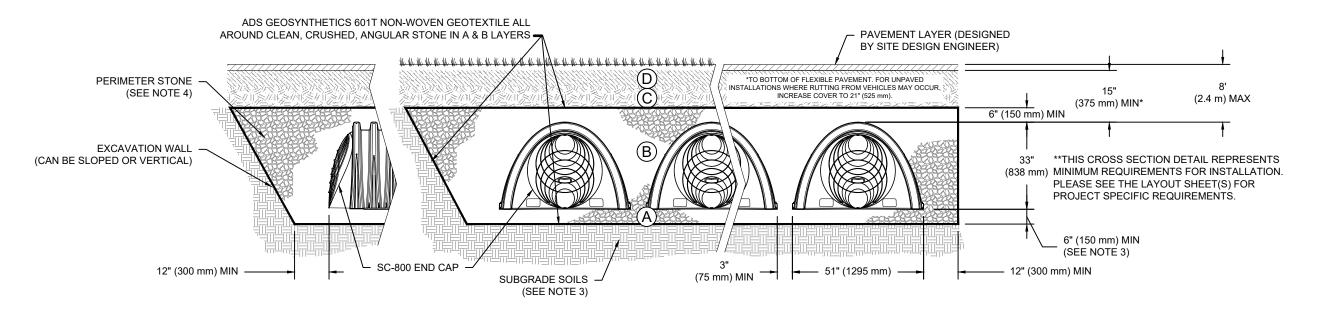
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2 OF 6

# **ACCEPTABLE FILL MATERIALS: STORMTECH SC-800 CHAMBER SYSTEMS**

	MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
С	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 15" (375 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE.  MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145 <sup>1</sup> A-1, A-2-4, A-3 OR AASHTO M43 <sup>1</sup> 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
В	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE <sup>5</sup>	AASHTO M43 <sup>1</sup> 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
А	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE <sup>5</sup>	AASHTO M43 <sup>1</sup> 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. <sup>2,3</sup>

- THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
- STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
- WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGNS, CONTACT STORMTECH FOR
- ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION
- WHERE RECYCLED CONCRETE AGGREGATE IS USED IN LAYERS 'A' OR 'B' THE MATERIAL SHOULD ALSO MEET THE ACCEPTABILITY CRITERIA OUTLINED IN TECHNICAL NOTE 6.20 "RECYCLED CONCRETE STRUCTURAL BACKFILL".



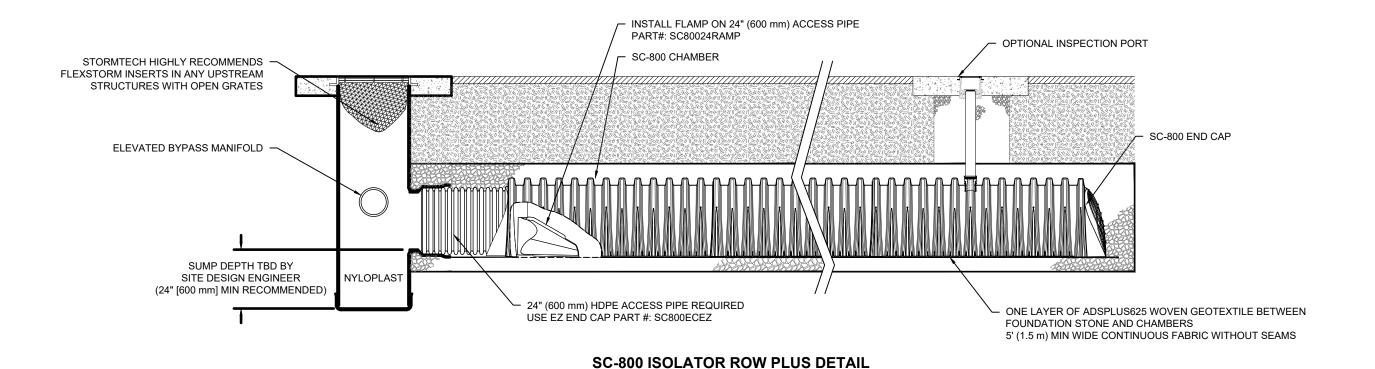
# **NOTES:**

- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- 2. SC-800 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS. REFERENCE STORMTECH DESIGN MANUAL FOR BEARING CAPACITY GUIDANCE.
- 4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
  - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
  - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
  - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 750 LBS/FT/%. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

HILLDALE PHASE 2 REVISED MADISON, WI, USA
DEAWN: AK
CHECKED: N DATE DWN CHK **StormTech®** Chamber System 4640 TRUEMAN BLVD HILLIARD, OH 43026 1-800-733-7473

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3 OF 6



# **INSPECTION & MAINTENANCE**

INSPECT ISOLATOR ROW PLUS FOR SEDIMENT

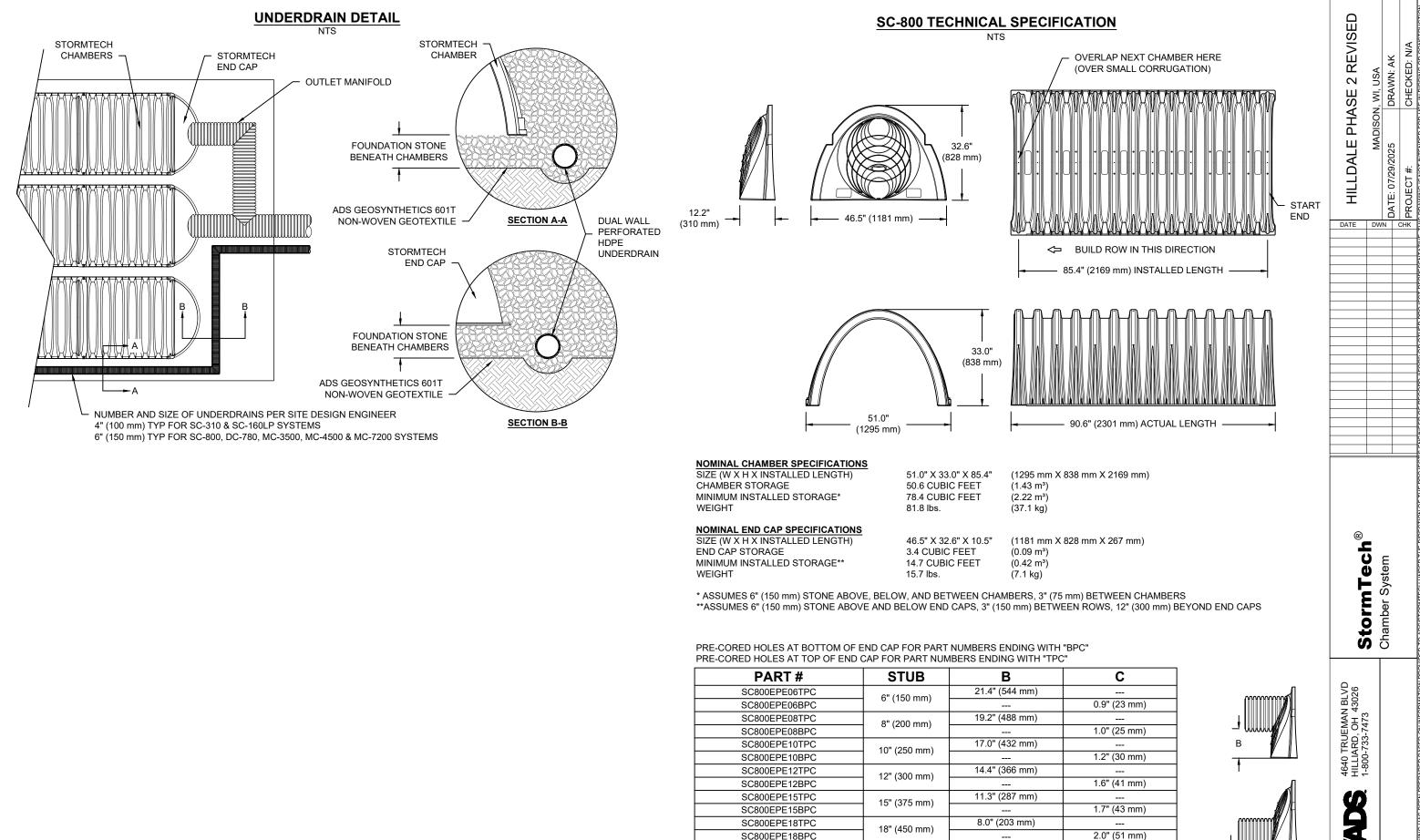
- A. INSPECTION PORTS (IF PRESENT)
- REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
- REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
- USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
- IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR PLUS ROWS
- REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
- USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
  - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
  - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
  - A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1 m) OR MORE IS PREFERRED
  - APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
  - C. VACUUM STRUCTURE SUMP AS REQUIRED
- REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.
- INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM. STEP 4)

### **NOTES**

- INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
- 2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

HILLDALE PHASE 2 REVISED MADISON, WI, USA
DRAWN: AK
CHECKED: 1 07/29/2025 DATE DWN CHK **StormTech**® Chamber System

> SHEET 4 OF 6



NOTE: ALL DIMENSIONS ARE NOMINAL

SC800EPE24BPC

SC800EPE

24" (600 mm)

NONE

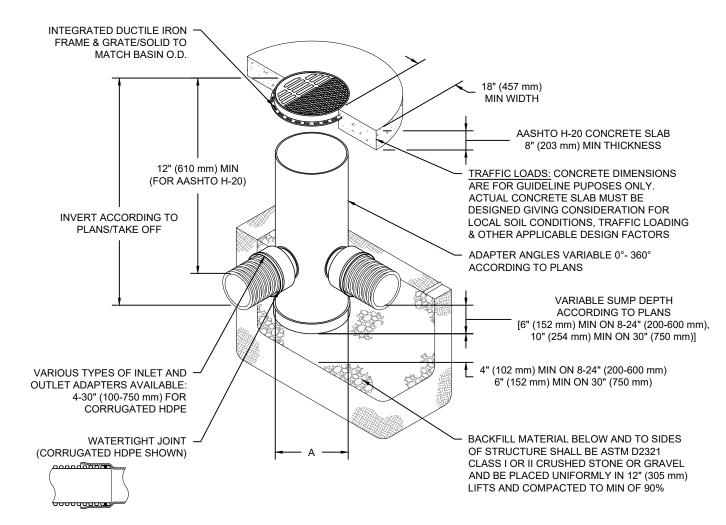
2.3" (58 mm)

SOLID END CAP

SHEET

5 OF 6

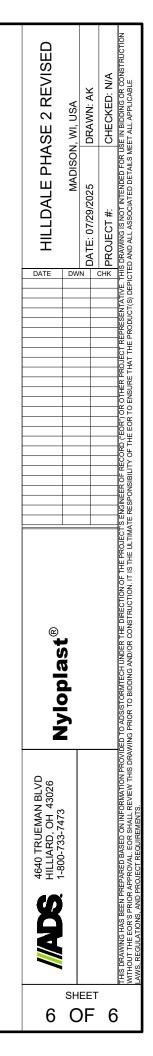
# **NYLOPLAST DRAIN BASIN**



# **NOTES**

- 1. 8-30" (200-750 mm) GRATES/SOLID COVERS SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
- 12-30" (300-750 mm) FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05 DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS
- DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS & HANCOR DUAL WALL) & SDR 35 PVC
- FOR COMPLETE DESIGN AND PRODUCT INFORMATION: WWW.NYLOPLAST-US.COM
- 6. TO ORDER CALL: 800-821-6710

Α	PART#	GRATE/SOLID COVER OPTIONS							
8" (200 mm)	2808AG	PEDESTRIAN LIGHT DUTY	STANDARD LIGHT DUTY	SOLID LIGHT DUTY					
10" (250 mm)	2810AG	PEDESTRIAN LIGHT STANDARD LIGHT DUTY DUTY		SOLID LIGHT DUTY					
12"	2812AG	PEDESTRIAN	STANDARD AASHTO	SOLID					
(300 mm)		AASHTO H-10	H-20	AASHTO H-20					
15"	2815AG	PEDESTRIAN	STANDARD AASHTO	SOLID					
(375 mm)		AASHTO H-10	H-20	AASHTO H-20					
18"	2818AG	PEDESTRIAN	STANDARD AASHTO	SOLID					
(450 mm)		AASHTO H-10	H-20	AASHTO H-20					
24"	2824AG	PEDESTRIAN	STANDARD AASHTO	SOLID					
(600 mm)		AASHTO H-10	H-20	AASHTO H-20					
30"	2830AG	PEDESTRIAN	STANDARD AASHTO	SOLID					
(750 mm)		AASHTO H-20	H-20	AASHTO H-20					



EXTERIOR LUMINAIRE SCHEDULE															
			F	IXTURE		FIXTURE		FIXTURE		POLE ASSEMBLY					
TAG	DESCRIPTION	LUMENS	WATTS	LAMP TYPE	DISTRIBUTION	COLOR TEMP	MANUFACTURER	MODEL#	FIXTURES PER POLE		BASE ABOVE GRADE	POLE HEIGHT	HEIGHT ABOVE GRADE	MANUFACTURER	MODEL#
L1	LED SINGLE HEAD PARKING POLE MOUNTED FIXTURE	7,000	62	LED	TYPE 3	3500	SELUX	SACL-R3-5G700-35K-18-BK-UNV-DS	1	62	0' - 0"	14' - 0"	14' - 0"	SELUX	A35-14-BK-BC5
L2-D	LED DOUBLE HEAD PARKING POLE MOUNTED FIXTURE	15,630	146	LED	TYPE 3	3000	LANDSCAPE FORMS	LE350-T3-HO-CLR-30K-UV1-4B-NMS-BK	2	292	0' - 0"	25' - 0"	25' - 0"	LANDSCAPE FORMS	LE-25-A-NTW-NUT-BK
L2-S	LED SINGLE HEAD PARKING POLE MOUNTED FIXTURE	7,815	73	LED	TYPE 3	3000	LANDSCAPE FORMS	LE350-T3-HO-CLR-30K-UV1-4B-NMS-BK	1	73	0' - 0"	25' - 0"	25' - 0"	LANDSCAPE FORMS	LE-25-A-NTW-NUT-BK
L3	LED SINGLE HEAD PARKING POLE MOUNTED FIXTURE	7,815	14	LED	TYPE 3	3000	SELUX	OLPL-F40-SBX-2G350-30-UNV-DS	4	56	0' - 0"	25' - 0"	25' - 0"	SELUX	
L5	LED TREE UPLIGHT ACCENT FIXTURE	600	9	LED		3000	KICHLER	16020-BKT-30							
L6	LED BOLLARD FIXTURE	424	40	LED		3000	FORMS+SURFACES	HELIO SERIES 600							
L7	LED COMPACT DOWNLIGHT	583	7	LED		3000	BEGA	55842-K3-BK-10043							
LE-1	LED EXTERIOR DOWNLIGHT	600	9	LED		3000	JUNO	IC1LED-G4-06LM-30K-90CRI							
SL-1	LED EXTERIOR SCONCE	1,124	15	LED		3000	EUREKA	3450-LED.HO-30-277V-DV-BLKE							
SL-1(E)	LED EXTERIOR SCONCE	1,124	15	LED		3000	EUREKA	3450-LED.HO-30-277V-DV-BLKE							
SL-2	LED EXTERIOR SCONCE	1,124	15	LED		3000	EUREKA	3450							
SL-3	LED EXTERIOR CYLINDER	2,400	30	LED		3000	ALCON	11240-2-BK (NO UP LIGHT)							

	SITE ILLUMII	NANCE RESULT	S - 100		
Calculation Points Name	Average	Maximum	Minimum	Avg/Min	Max/Min
KELAB DRIVE	1.3 fc	3.8 fc	0.1 fc	13.7	39.
BLDG 100 PED WALKWAY	1.1 fc	2.9 fc	0.1 fc	14.5	39.

SITE LIGHTING GENERAL NOTES

- ALL LIGHT SOLID LINES APPROXIMATELY INDICATE EXISTING DEVICES TO REMAIN, UNLESS INDICATED OTHERWISE. LIGHT SOLID SHADED AREA INDICATES AREA TO REMAIN AS IS.
- 2. ALL HEAVY SOLID LINES APPROXIMATELY INDICATE NEW DEVICES TO BE PROVIDED.
- 3. WIRING SHALL CONFORM TO THE NATIONAL ELECTRICAL CODE (NEC) AND APPLICABLE LOCAL CODES, INCLUDING PROVISION OF EQUIPMENT GROUNDING AS REQUIRED BY THE NEC.
- 4. POWER CONDUCTORS SHALL BE SIZED PER THE NEC AMPACITY TABLES (ARTICLE 310), INCLUDING ADJUSTMENT FACTOR AND NEUTRAL CONDUCTOR REQUIREMENTS (FEED AND BRANCH NEUTRAL CONDUCTORS MUST BE COUNTED AS CURRENT CARRYING CONDUCTORS). RUN SEPARATE NEUTRAL CONDUCTORS FOR ALL LIGHTING CIRCUITS.

# KEYED NOTES (KEYED NOTES PER PROJECT)

X3 EXISTING SITE LIGHTING SOUTH OF KELAB DRIVE SHALL BE EXISTING TO REMAIN.

•0.1 •0.4 •1.3 •0.2 •0.4 •0.3 •0.9 •0.5 •1.6  $\langle X3 \rangle$ (3) V LACE SITE PLAN - PHOTOMETRIC

ES100 SCALE: 1" = 20'-0"



milwaukee | madison | green bay | denver | atlanta

ENGINEERING, INC. 5525 NOBEL DRIVE SUITE 110 MADISON, WI 53711

PH: 608.277.1728 FAX: 608.271.7046

JDR PROJECT NO: 22.0261

PROJECT INFORMATION

HILLDALE BUILDING 100

D 702 N. Midvale Blvd. Madison, WI 53705

ISSUANCE AND REVISIONS

DATE DESCRIPTION

KEY PLAN

**5** 

SHEET INFORMATION

PROGRESS DOCUMENTS
NOT FOR CONSTRUCTION

These documents reflect progress and intent and may be subject to change, including additional detail. These are not final construction documents and shall not be

used for final bidding or construction-related purposes.

PROJECT MANAGER

A PROJECT NUMBER

SITE PLAN -PHOTOMETRIC\_

ES100

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2 4



# Hilldale Development 08.01.2025



Site Experience Design & Landscape Architecture

# **UNIT PAVING - WAUSAU**

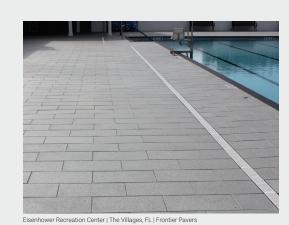
VEHICULAR GRADE UNIT PAVER



# WAUSAU TILE H-SERIES

## **TECHNICAL ADVANTAGES**

- Industry leading strength 9,500 psi
- Paver thicknesses from 1 5/8" 4" thick
- Spacing lugs on the pavers for ease of installation
- Quick Ship program available



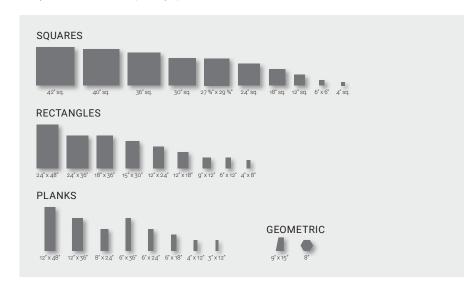




### Rosemary Square | West Palm Beach, FL | Estate Pave

## STANDARD SIZES

Pavers range in thickness from 1 5/8" - 4" depending on the size. Each Wausau Tile paver series is also available in a variety of standard and custom plank-style paver sizes.

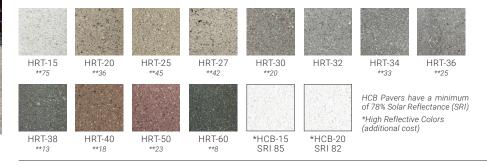


### **TECHNICAL INFORMATION**

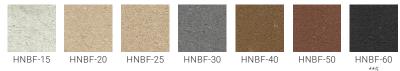
PROPERTY	ADVANCED TESTING VALUE	TEST METHOD
Compressive Strength	> 9,500 PSI avg. with no individual unit less than 8,000 PSI	ASTM C 140
Water Absorption	< 4.5%	ASTM C 140
Flexural Strength	> 1,800 pounds average	ASTM C 140
Freeze/Thaw	< 1% loss of dry weight (100 cycles)	ASTM C 1262
Center Load	2,000 lbs.	WTCL 99

Testing based on 24"x24"x2" pressed paver

# **ESTATE**

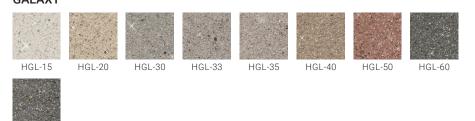


## **ESTATE II**

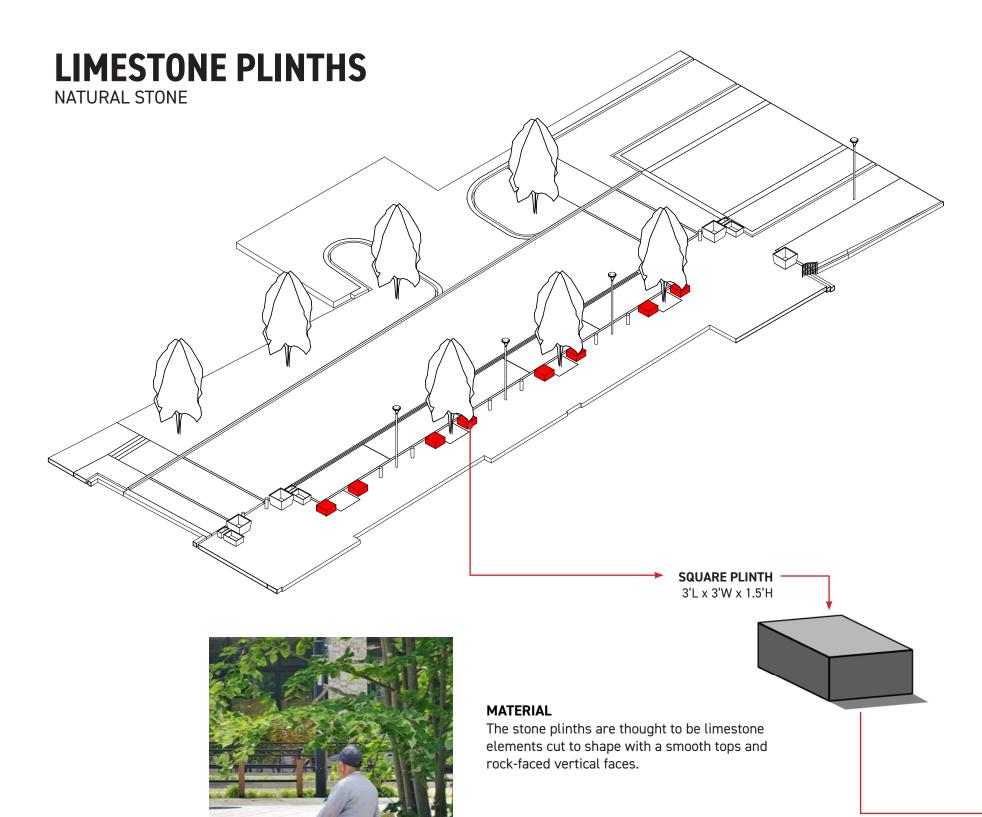




# GALAXY



Waysay Tila aan





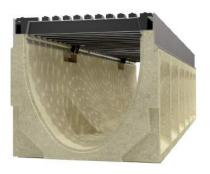
# TRENCH DRAIN

8" KLASSIK DRAIN

ACO DRAIN KlassikDrain K200/KS200

# KlassikDrain K200/KS200

# 8" Internal Width General Purpose System

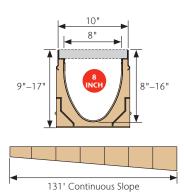


K200 is an 8" wide system with galvanized steel edge rail and wide choice of grates in different materials and slot styles up to Load Class E (60 ton) featuring either patented DrainLok or QuickLok® boltless locking systems.

KS200 is the same system, but the edge rail is grade 304 stainless steel. KS200 should be used where increased aesthetics are required, or where increased corrosion resistance is required.

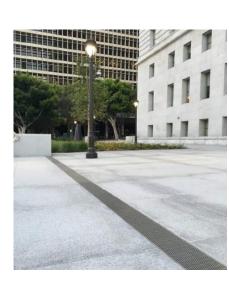
### **KLASSIKDRAIN K200/KS200 SELECTION CRITERIA**





### **Typical Applications:**

- Parking lots & garages
- Shopping malls
- Pedestrian areas
- Light industrial areas Commercial areas
- Internal applications



### **ACO DRAIN**

# Type 676D Longitudinal ductile iron grate (ADA)



- Certified to EN 1433 Load Class C 56,000 lbs 967 psi
- Uses 'DrainLok' boltless locking system

**Product Features** 

- Suitable for use with K200, KS200, and H200K-13 channels
- Manufactured from ductile iron to ASTM A 536-84 Grade 65-45-12
- E- coated for improved resistance against rust
- Complies with ADA American Disabilities Act of 1990 Section 4.5.4
- Complies with ASME: A112.6.3 2001: Section 7.12 Heel Resistant Strainers and Grates



# **Specifications**

The surface drainage system shall be ACO Drain K200, KS200, and H200K-13, channels\*, complete with ACO Type 676D longitudinal ductile iron grate with 'DrainLok' locking as manufactured by ACO Polymer Products, Inc. or similar approved.

### Materials

The covers shall be manufactured from ductile iron and have **minimum** properties as follows:

- Independently certified to meet Load Class C to EN 1433 - 56,000 lbs - 967 psi
- Ductile iron to ASTM A 536-84 Grade 65-45-12
- Intake area of 35.8 sq. in. (23.096 cm²) per half meter of grate

The overall width of 9.41" (239mm) and overall length of 19.69" (500mm). Slots measure at a maximum of 0.24" (6mm) by 2.07" (52.57mm).

### Installation

The trench drain system and grates shall be installed in accordance with the manufacturer's installation instructions and recommendations.





# **BOLLARDS DECORATIVE**

Forms+ **Surfaces** 

PRODUCT DATA

HELIO™BOLLARD, SERIES 600

Helio Bollards, Series 600 bring an elegant simplicity to public spaces of all kinds. Constructed of stainless steel, fixtures 6" in diameter are available in illuminated and non-illuminated variations with or without an optional embedded security core. Illuminated bollards feature a frosted acrylic lens, 180° or 360° light distribution, and Cree® LEDs in 3000K warm white and 4000K neutral white. Helio Bollards with 3000K LEDs are approved by the International DarkSky Association to minimize light pollution. For expanded performance, the Helio Family also includes security bollards in other sizes and security rating options, all in illuminated and non-illuminated designs.

MATERIAL & CONSTRUCTION DETAILS		
CONFIGURATIONS	LED LAMPS & DRIVER	INSTALLATION & MAINTENANCE
• Series 600 Helio Bollards are 40" high x 6" in diameter.	Custom LED light engine with Cree® LEDs.	Standard mounting is surface mount.
<ul> <li>Illuminated bollards are available with 180° and 360° light distribution options.</li> </ul>	3000K warm white and 4000K neutral white color temperatures.	Security bollards with embedded security cores are available for an upcharge and can use either of two
Non-illuminated versions are also available.	424 lumen output.	mounting styles: deep set or shallow mount.
Helio Bollards, Series 600, are available with an optional	Less than 5% upward lumen output.	Installation of a surge protector as part of each unit's  wiring in recommended.
embedded security core that accommodates two	LED driver input voltage is 120-277VAC, -30°C	wiring is recommended.
mounting styles: deep set mounting achieves an S10-P1 security rating; shallow mounting achieves an SC30-P1	minimum starting temperature.	Stainless steel mounting hardware sold separately. Templates are available upon request.
security rating.	Driver has reverse-phase, forward-phase, and 0-10V dimming capabilities.	See pages 2-4 for more information
	LED driver certifications include: IP66 (waterproof) enclosure, and Class 2 rated output (UL8750).	
MATERIALS & FINISHES		MAINTENANCE
• Illuminated bollards have a tubular stainless steel column,	frosted acrylic lens, and a stainless steel head cap.	Metal surfaces can be cleaned as needed using a soft
Non-Illuminated bollards are tubular stainless steel with w	cloth or brush with warm water and a mild detergent.  Avoid abrasive cleaners.	
Stainless steel is standard with a Satin finish and Ceramile	Avoid abrasive cleaners.	
• For optional powdercoat colors see the Forms+Surfaces F upcharge.		

### CERAMILOC TREATMENT

Ceramiloc is an invisible surface treatment that offers significantly enhanced protection from weather and graffiti and increases the maintenance ease of stainless steel. Ceramiloc combines ceramic durability with an unparalleled ability to lock out water spots, fingerprints, graffiti and more. Patented technology bonds nanosilica particles to the surface of the stainless steel. The treatment minimally alters the surface appearance of the stainless and offers numerous benefits:

- Easily Cleaned: The Ceramiloc treatment creates a surface that simultaneously resists fingerprints and is easy to clean. Water spots, grease marks and more can be quickly wiped away. It also creates an "anti-graffiti" surface - even permanent marker is easily removed with a clean microfiber towel and water.
- Durable: Ceramiloc-treated materials are corrosion- abrasion- and scratch-resistant. The treatment is permanent, UV stable, and will not degrade or discolor over time. Salt spray testing per ASTM B117 showed no change after 240 hours.
- Environmentally Sound: The Ceramiloc treatment is a no-VOC, water-based process. Because Ceramiloc surfaces are so easily maintained, cleaning solutions and maintenance are kept to a minimum.

### LIGHT ENGINE DESCRIPTIONS

LED ENGINE	LIGHT DISTRIBUTION	LIGHT DISTRIBUTION DESCRIPTION		B.U.G. RATINGS
3000K LED	360°	50W LED driver	424	B0-U1-G0
4000K LED	360°	50W LED driver	424	B0-U1-G0
3000K LED	180°	30W LED driver	158	B0-U1-G0
4000K LED	180°	30W LED driver	158	B0-U1-G0

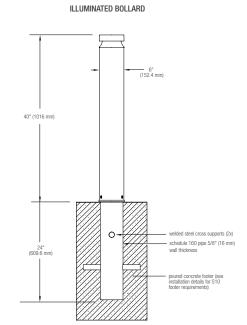
\*Luminaire lumens represents the absolute photometry for the luminaire, and indicates the lumens out of the entire fixture.

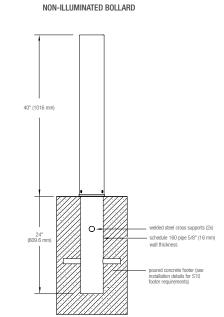
NOTE: Polar candela and isofootcandle plots can be found on the Helio Bollard, Series 600 product page on our website.

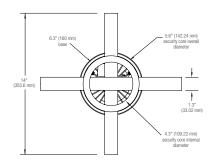
# Forms+ Surfaces

HELIO™BOLLARD, SERIES 600

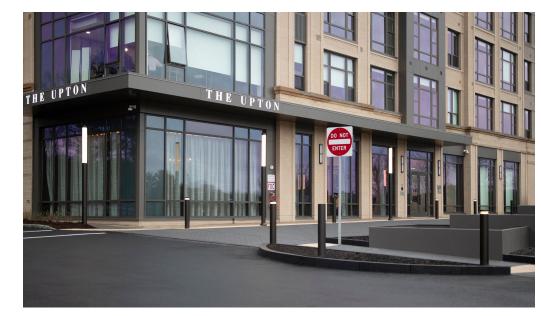
### DEEP SET EMBEDDED S10-P1 SECURITY CORE













# **LIGHTING**

# MATCH EXISTING STREET LIGHTING

Project:	Custom	er:								selux
Туре:						Qty:				
Saturn Cı	utoff LED					3	•			
Order Code:	_SACL						-			
Pole Order Code:	Series I	 Height	Finish	Options						
SACL	Series	SACL Saturn Cuto	ff LED							
	Optics	R1 Type I	R2 Type II	R3 Type III	R3W Type III (Wide)	R4 Type IV	R5R Type V (Round)	R5S Type V (Square)	R5Q Type V (Rectangular)	
	Mounting	1 Single	1A Single Arm Mount	2 Double	W Wall Mount					
	Light Engine	5G450 39W/4442Im	5G700 62W/6644lm	<b>5G105</b> 93W/9241lm						"Based on R1 distribution in 3000K CC
	ССТ	<b>27¹*</b> 2700K	<b>30</b> <sup>1</sup> 3000K	<b>35*</b> 3500K	<b>40</b> 4000K	<b>50*</b> 5000K				<sup>1</sup> DarkSky approved. *For other CCTs please consult factory
	Power Cord Length	<b>08</b> 8 ft	<b>10</b> 10 ft	<b>12</b> 12 ft	<b>14</b> 14ft	<b>16</b> 16 ft	<b>18</b> 18 ft	XX <sup>2</sup> XX		*For 1 mounting use the pole height. For 1A or 2 mounting use the pole height +2. *Specify number of feet in whole foot increments.
	Finish	WH White	BK Black	BL Semi-Matte Black	BZ Bronze	SV Silver	SP Specify Premium (	Color		
	Voltage	UNV 120V-277V	120 120V	<b>240</b> 240V	<b>277</b> 277∨	<b>347</b> <sup>3</sup> 347V	480³ 480V			<sup>3</sup> Equipped with step-down transforme
	Options	DM <sup>5</sup> Dimming (0-10V)	HS <sup>4</sup> House Side Shield (180°)	HL30 <sup>5,6</sup> Hi-Lo Switching Low Output 30%	HL50 <sup>5,6</sup> Hi-Lo Switching Low Output 50%	PCT <sup>7</sup> Photocell Tenon	MS <sup>5,7</sup> Pole Motio Sensor with Optional Photocell (See page order code	th 3 for		<sup>4</sup> Type I, III, III, and IV only. <sup>5</sup> DM, HLXX, or MS only. Cannot be combined. <sup>1</sup> 20V, 240V, or 277V only. <sup>7</sup> PCT or MS only. Cannot be combined
Product Modif										Approvals



MFR: SELUX



Date:

# **BIKE RACK**

MATCH EXISTING BIKE RACKS



The Opal bike rack will park your bikes safety and securely. The Opal offers bikes two distinct contact points for secure locking. Each Opal bicyclerack can park two bikes. This bike rack is a simple, modern design and provides and excelletn and stylish choice for any outdoor space where bike parking is needed.

Item #: OPR -2 - \_\_\_\_ - \_\_\_

# **PLANTERS**

SELECTION

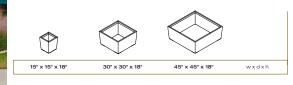
### Sorella Specifications

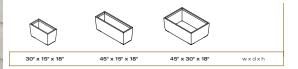
Sorella planters may be specified in powdercoated metal. Planters available in rectangle or square shapes, in 18" and 30" heights.

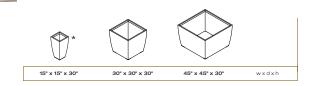
Fabricated, welded and ground steel panels attach to a polyethylene base, with glides and optional drain holes.

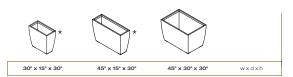
Planter bases and glides are compression-molded recycled plastic resulting from an innovative, patented melting process that utilizes 100% post-consumer and post-industrial waste. This unique process blends several material types, channeling more discarded plastics away from the landfill and into new life. Bases are 100% recyclable.

Planters are freestanding, with the exception of those noted below.









\* Planters must be surface mounted.

and elevate the quality of public space. High quality products and outstanding customer experience makes us one of the world's premier designers and manufacturers of outdoor commercial furnishings.



### Finishe

All metal is finished with Landscape Forms' proprietary Pangard II® polyester powdercoat, a hard yet flexible finish that resists rusting, chipping, peeling and fading. A wide range of standard, optional and custom colors are available.

### To Specify

Select Sorella planter, product description and size. Select powdercoat metal color. Specify with or without drain holes.

### landscapeforms.com

Visit our website for product details, color charts, technical sheets, sales office locations. Download JPG images, brochure PDF, CAD details, CSI specifications.

Sorela is designed by Robert Chipman, ASIA.
Specifications are subject to change without notice.
Sorela is manufactured in the U.S.A.
Landscape Forms supports the Landscape Architecture Foundation
at the Second Century level.
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landscapeforms<sup>®</sup>

MFR: LANDSCAPEFORMS / ITEM: SORELLA



MFR: MADRAX / ITEM: OPAL





# **STREET TREE**Platanus x acerifolia 'Morton Circle'

# SHRUB Ribes alpinum

# **ORNAMENTAL GRASS**

Panicum virgatum 'Shenandoah'



EXCLAMATION LONDON PLANETREE ALPINE CURRANT SHENANDOAH SWITCH GRASS

