

GREAT LAKES WATER AUTHORITY

CONTRACT NO. GLWA-XX-XXX

HUBBELL-SOUTHFIELD CSO FACILITY IMPROVEMENTS







GLWA BOARD OF DIRECTORS

Mark Miller
John J. Zech
Jaye Quadrozzi
Freman Hendrix
Brian Baker
Gary Brown

60% SUBMITTAL NOT FOR CONSTRUCTION

GLWA STAFF

Suzanne Coffey, P.E.

Chief Executive Officer

Navid Mehram, P.E.

Chief Operating Officer, Wastewater Operations

Christopher Nastally, P.E.

Director - Wastewater Engineering

Philip Kora, P.E.

Manager - Life Cycle Project Management

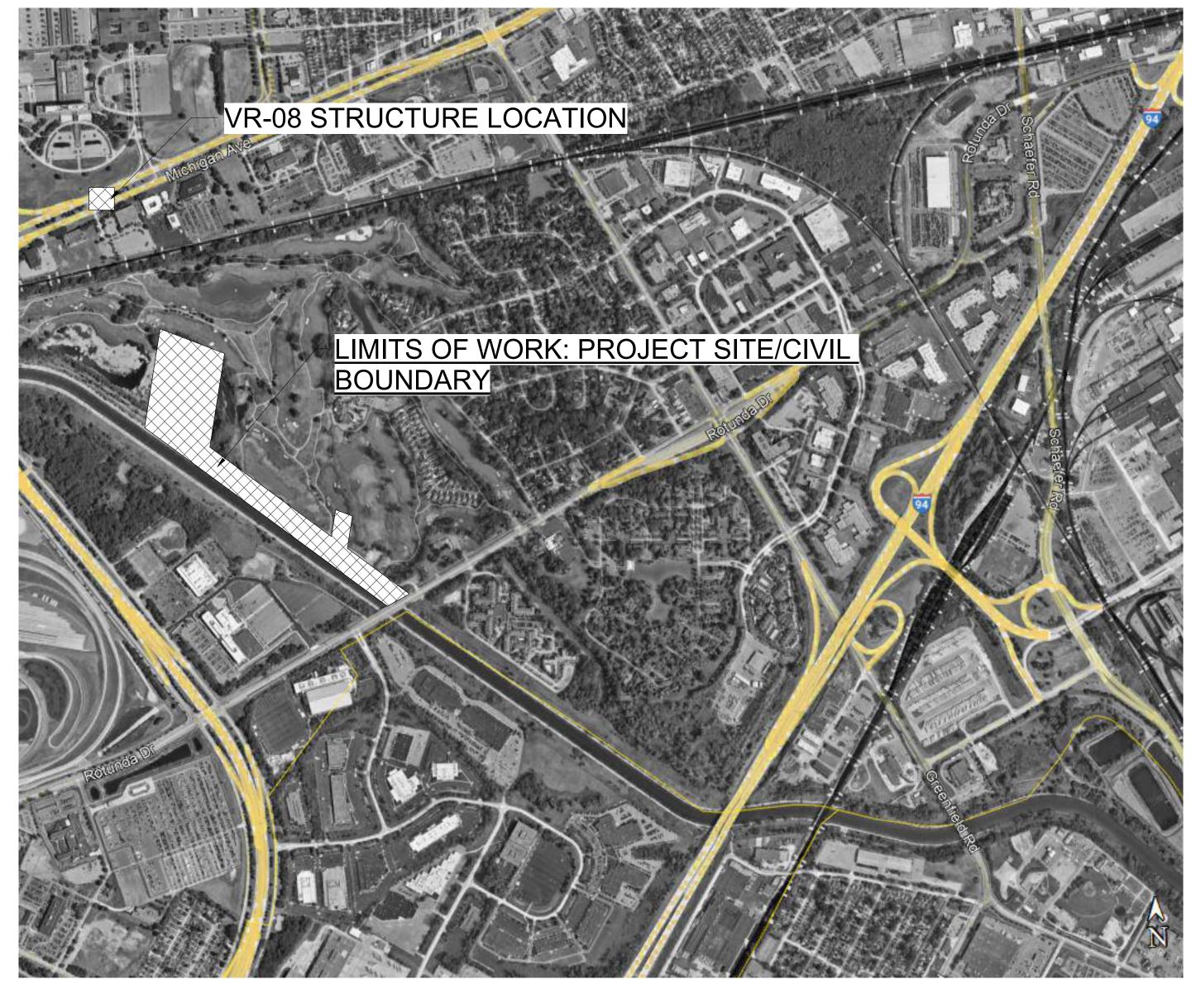
OCTOBER 2024



CITY OF DETROIT AUTHORITY HAVING JURISDICATION

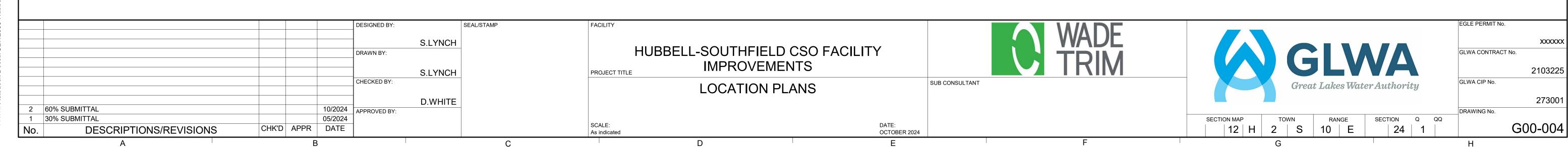
L201: LOCATED AT W CHICAGO AND HUBBELL AVE. REFER TO SHEET C01-201 L205: LOCATED AT CAPTIAL AND SOUTHFIELD RD. REFER TO SHEET C01-202



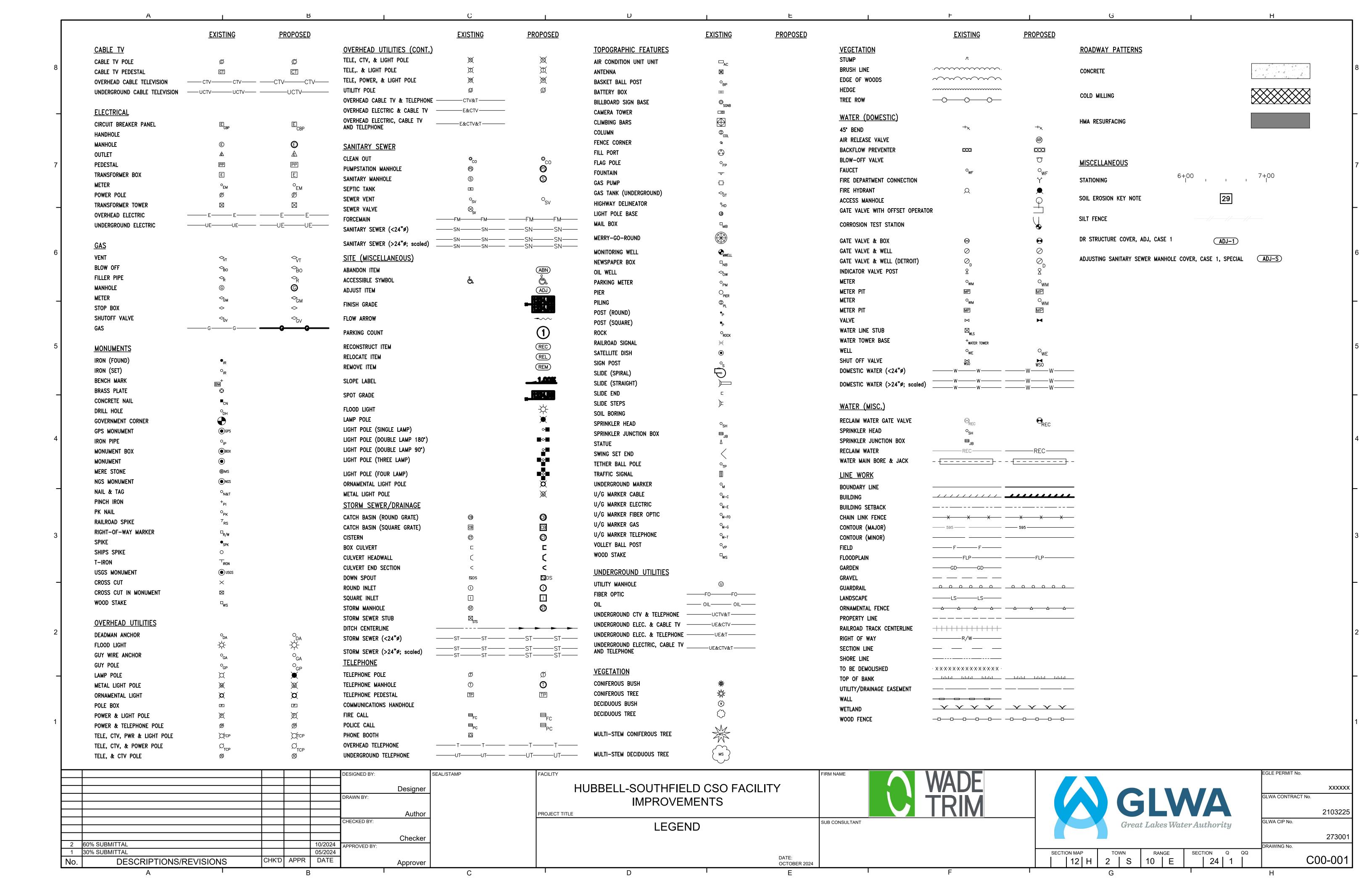


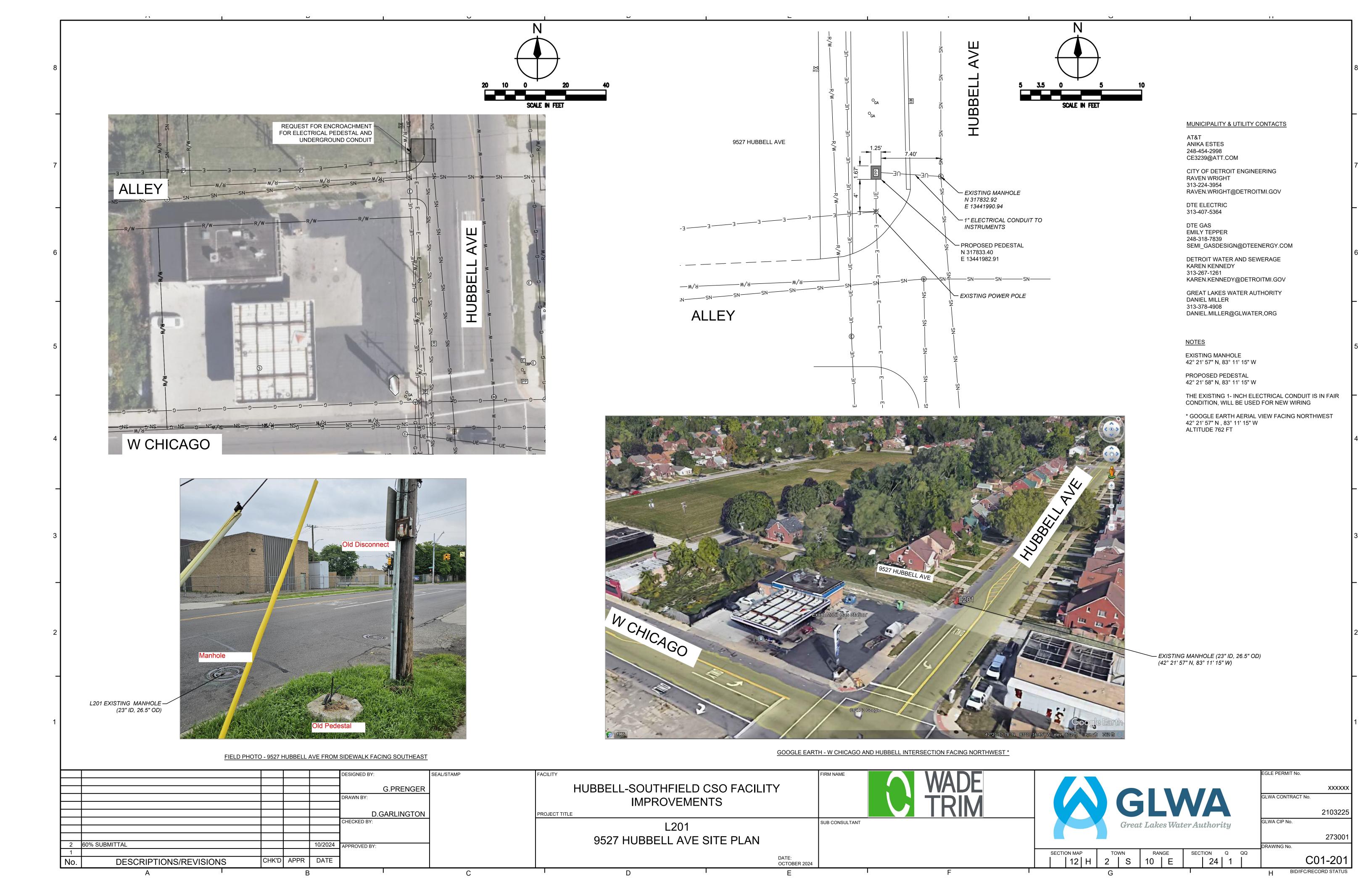


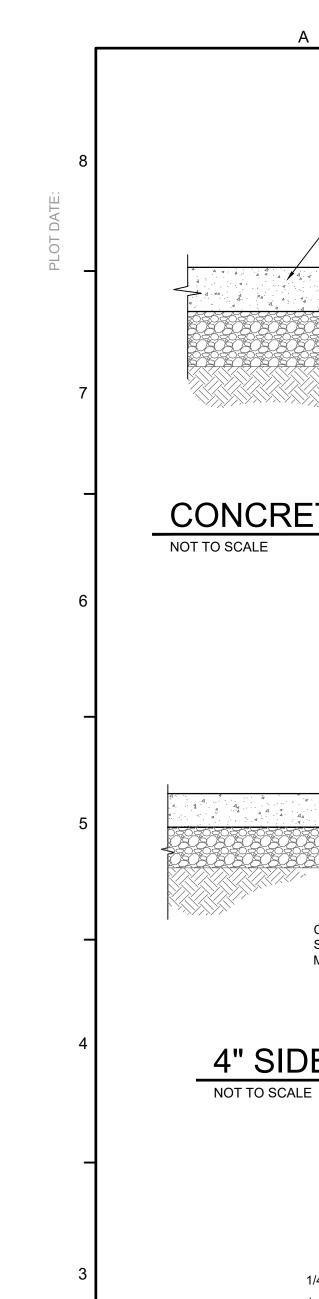
16450 ROTUNDA DR, DEARBORN, MI 48120 CITY OF DEARBORN AUTHORITY HAVING JURISDICATION

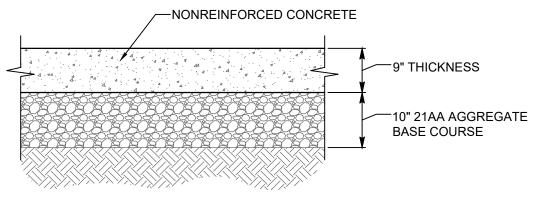


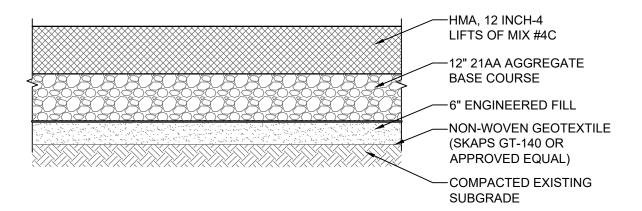
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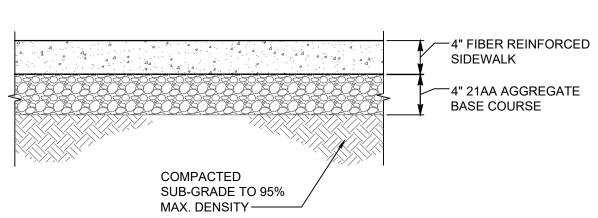


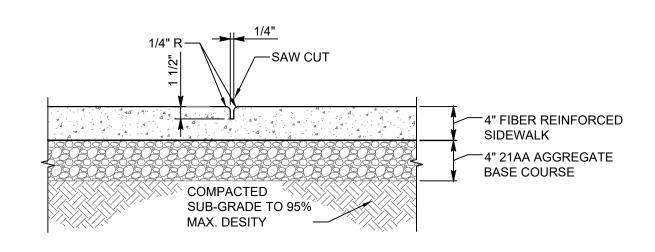


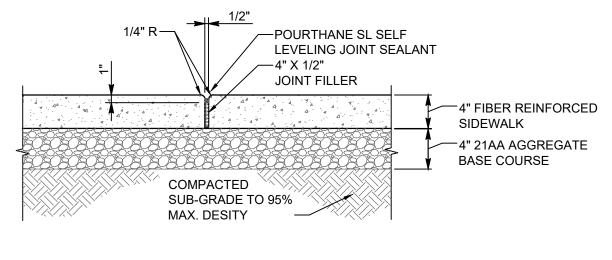


CONCRETE DRIVE PAVEMENT

ASPHALT PAVEMENT REPAIR NOT TO SCALE







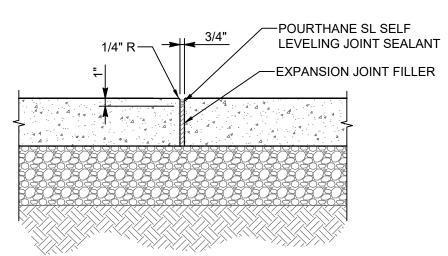
NOTE: THIS JOINT TO BE SPACED AT 50' ± O.C.

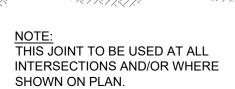
4" SIDEWALK DETAIL

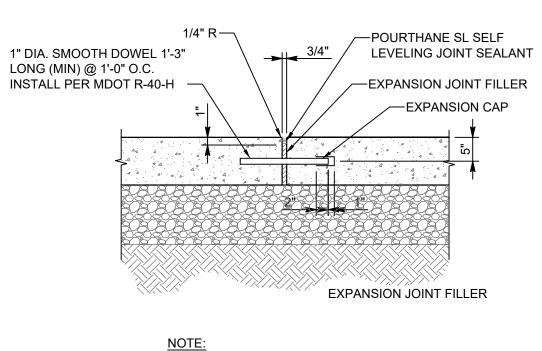
SIDEWALK CONSTRUCTION JOINT 'D'

NOT TO SCALE

SIDEWALK EXPANSION JOINT 'E' NOT TO SCALE





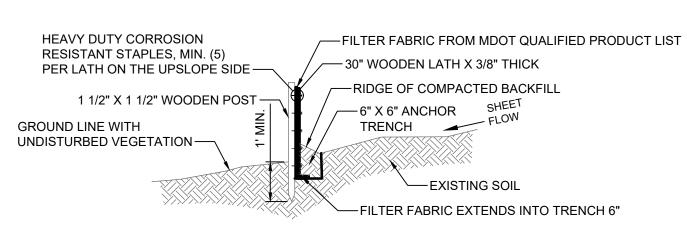


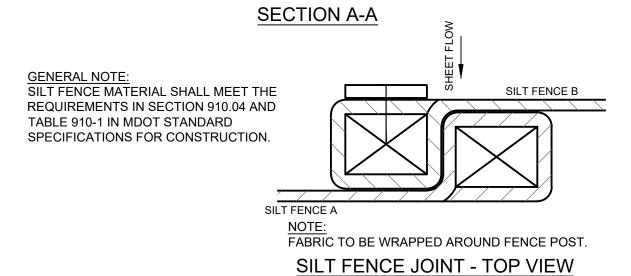
NOTE: THIS JOINT TO BE USED AT ALL INTERSECTIONS AND/OR WHERE SHOWN ON PLAN.

EXPANSION JOINT (E1)

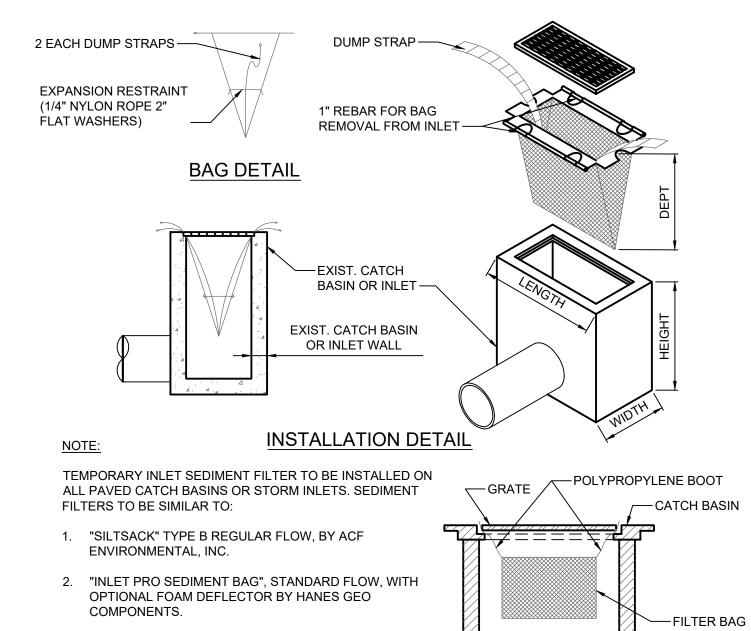
EXPANSION JOINT (E2)

	DESIGNED BY: SEAL/STAMP	FACILITY	FIRM NAME		EGLE PERMIT No.
	L.DWYER	HUBBELL-SOUTHFIELD CSO FACILITY	FIRM NAME WADE		XXXXX
	DRAWN BY:		TOIM		GLWA CONTRACT No.
	D.HEROLDJACKSON	PROJECT TITLE		GLAAH	2103225
	CHECKED BY:	CIVIL	SUB CONSULTANT	Great Lakes Water Authority	GLWA CIP No.
	K.LEFEVRE	CIVIL DETAILS	Applied Colones Inc		27300
4 COOK CLIDAVITTAL	APPROVED BY:	CIVIL DETAILS	Applied Science, Inc.		DRAWING No.
1 60% SUBMITTAL No. DESCRIPTIONS/REVISIONS	CHK'D APPR DATE J. MICHALSKI	SCALE: DATE:	2024	SECTION MAP	C01-501





EROSION CONTROL SILT FENCE



FILTER AS NEEDED. **GENERAL NOTES:**

NOT TO SCALE

DESCRIPTIONS/REVISIONS

60% SUBMITTAL

3. "DANDY CURB SACK" BY DANDY PRODUCTS, INC.

4. "BASIN BAG", REGULAR FLOW BY CSI GEOTURF, CLEAN

- CONTRACTOR SHALL OBTAIN PERMISSION OF THE ENFORCING ROAD AGENCY BEFORE THIS TYPE OF CONTROL IS CONSTRUCTED IN THE ROAD RIGHT-OF-WAY.
- 2. CONTRACTOR SHALL KEEP CURBS & GUTTER INLET FILTERS (AFTER PAVING) IN PLACE UNTIL ALL AREAS CONTRIBUTING TO THEM ARE STABILIZED WITH VEGETATION.
- CONTRACTOR SHALL PERFORM WEEKLY INSPECTION AND MAINTENANCE TO ENSURE THAT THE CURB & GUTTER INLET FILTER (AFTER PAVING OPERATES EFFICIENTLY.

INLET PROTECTION FABRIC DROP

DESIGNED BY: L.DWYER DRAWN BY: D.HEROLDJACKSON HECKED BY: **K.LEFEVRE**

HUBBELL-SOUTHFIELD CSO FACILITY IMPROVEMENTS

PROJECT TITLE CIVIL

—PAVEMENT

TRENCH WIDTH

NOTES:

NOT TO SCALE

SEAL/STAMP

-MDOT CLASS II GRANULAR MATERIAL

PLACE AND COMPACT (IN MAX. 12" LIFTS)

BY THE "CONTROLLED DENSITY METHOD"

TO 96 PER SECTION 31 23 33, 3.10 B OF

-NOMINAL PIPE DIAMETER

4" MIN. -6" MAX MDOT

MAXIMUM TRENCH WIDTH

2'-6"

PIPE DIAMETER PLUS 18"

PIPE DIAMETER PLUS 24"

CLASS II BEDDING

NOMINAL PIPE

DIAMETER

LESS THAN 18"

18" TO 24"

1. NO EXTRA PAYMENT WILL BE MADE FOR BASE AND PAVEMENT

PERFORMED TO MINIMIZE THE SURFACE DISRUPTION.

MAXIMUM TRENCH WIDTH LISTED ABOVE.

GREATER THAN 24"

RESTORATION ITEMS DUE TO ADDITIONAL EXCAVATION BEYOND THE

2. REFER TO PAVEMENT RESTORATION DETAILS FOR BASE AND PAVEMENT

3. TRENCHING SHALL BE PER OSHA 29 CFR, SUBPART P AND SHALL BE

UTILITY TRENCH - WATER MAIN

AS SPECIFIED ON PLANS

MAXIMUM UNIT WEIGHT

CIVIL DETAILS

Applied Science, Inc.

XXXXX GLWA CONTRACT No.

2103225 GLWA CIP No. 27300°

C01-502

SOIL EROSION AND SEDIMENTATION CONTROL **GENERAL NOTES**

CONTROL MEASURES PROTECT AGAINST LOSS OF SOIL BY THE ACTION OF WATER, ICE, GRAVITY OR WIND.

CONTRACTOR SHALL ENSURE THAT SOIL EROSION AND SEDIMENTATION

SUMMARY OF BASIC PRINCIPLES

- KEEP DISTURBED AREA AS SMALL AS POSSIBLE.
- 2. STABILIZE AND/OR PROTECT DISTURBED AREAS AS SOON AS POSSIBLE
- KEEP STORM WATER RUNOFF VELOCITIES LOW.
- 4. RETAIN SEDIMENT WITHIN IMMEDIATE CONSTRUCTION AREA.

THE PURPOSE OF THIS PLAN IS TO SPECIFY METHODS FOR TEMPORARY EROSION CONTROL DURING CONSTRUCTION. IT IS INTENDED THAT MEASURES CALLED FOR IN THE SPECIFICATIONS AND SHOWN ON THESE PLANS BE STRICTLY ADHERED TO. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ASSURE THAT CONSTRUCTION PROCEDURES UNDERTAKEN BE IN CONFORMANCE WITH PART 91 OR ACT 451 OF 1994 THE STATE OF MICHIGAN'S SOIL EROSION AND SEDIMENTATION CONTROL ACT.

ALL SOIL EROSION AND SEDIMENTATION CONTROL DEVICES SHALL BE REGULARLY MAINTAINED BY THE CONTRACTOR THROUGHOUT THE DURATION OF THE PROJECT. COLLECTED SILT AND SEDIMENTATION SHALL BE REMOVED PERIODICALLY TO MAINTAIN THE EFFECTIVENESS OF THE SILT TRAPS OF SEDIMENTATION CONTROL DEVICES. WHERE REQUIRED. THE CONTRACTOR SHALL REPLACE FILTER MATERIALS WHICH HAVE BECOME INEFFECTIVE DUE TO CONTAMINATION OR PHYSICAL DETERIORATION.

IF POSSIBLE, NO GRUBBING SHOULD BE DONE WITHIN 30' OF AN ACTIVE WATERCOURSE.

AGGREGATES PLACED IN STREAMS SHOULD CONTAIN A MINIMUM OF FINES. AS A GENERAL RULE FOR DAMS IN SMALL STREAMS, AT LEAST 50% OF STONE SHOULD BE 6" DIAMETER OR LARGER. 3" OR LARGER STONE SHALL BE USED FOR LINING STREAM BOTTOMS WHERE LINING IS REQUIRED.

ALL TEMPORARY EROSION CONTROL FACILITIES SHOULD BE REMOVED BY THE CONTRACTOR AT THE COMPLETION OF THE CONSTRUCTION UNLESS ORDERED BY THE ENGINEER TO BE LEFT IN PLACE. CARE SHALL BE TAKEN DURING REMOVAL TO MINIMIZE SILTATION IN NEARBY DRAINAGE COURSES.

SURFACE DISRUPTION IN ADVANCE OF CONSTRUCTION INCLUDING CLEARING, GRADING OR SIGNIFICANT SOD REMOVAL SHALL BE LIMITED AS FOLLOWS, UNLESS PERMISSION IS OTHERWISE OBTAINED FROM THE GOVERNING AGENCY.

- 1. WET WEATHER SEASON (MARCH, APRIL, MAY) 5 DAYS PRIOR TO BEGINNING ANY EARTH CHANGE ACTIVITY.
- 2. DRY WEATHER SEASON (JUNE, JULY, AUGUST, SEPTEMBER, OCTOBER, NOVEMBER) - 10 DAYS PRIOR TO BEGINNING ANY EARTH CHANGE ACTIVITY.
- 3. COLD WEATHER SEASON (DECEMBER, JANUARY, FEBRUARY) 15 DAYS PRIOR TO BEGINNING ANY EARTH CHANGE ACTIVITY.

SOIL EROSION AND SEDIMENTATION CONTROL **MAINTENANCE NOTES**

THE CONTRACTOR SHALL INSPECT SOIL EROSION AND SEDIMENTATION CONTROL DEVICES WEEKLY AND WITHIN 24 HOURS OF A SIGNIFICANT RAIN EVENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE SOIL EROSION AND SEDIMENTATION CONTROL DEVICES.

MAINTENANCE INCLUDES ALL WORK NECESSARY FOR PROPER OPERATION OF THE DEVICES. DEVICES WHICH CAN NOT BE REPAIRED MAY NEED TO BE REPLACED. MAINTENANCE OF THE DEVICES SHALL BE PERFORMED WITHIN 24 HOURS OF INSPECTION.

SEDIMENT SHALL BE REMOVED AS NECESSARY TO MAINTAIN THE EFFECTIVENESS OF SOIL EROSION AND SEDIMENTATION CONTROL DEVICES.

SEDIMENT DEPOSITED ALONG SILT FENCE SHALL BE REMOVED WHEN IT REACHES 1/4 TO 1/3 THE HEIGHT OF THE FENCE.

TURF ESTABLISHMENT MEASURES SHALL BE MAINTAINED AS WOULD ANY OTHER DEVICES PRIOR TO ESTABLISHMENT OF PERMANENT TURF.

ALL MUD, DIRT AND DEBRIS TRACKED ONTO EXISTING ROADS FROM THIS SITE SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR.

SOIL EROSION AND SEDIMENTATION CONTROL **TEMPORARY FACILITIES**

THE CONTRACTOR SHALL CONSTRUCT THIS PROJECT IN COMPLIANCE WITH PART 91 OF ACT NO. 451 OF 1994, OF THE MICHIGAN COMPILED LAWS ENTITLED "SOIL EROSION AND SEDIMENTATION CONTROL" UNDER THE CONTROL OF THE LOCAL PERMIT AGENCY CHARGED WITH ADMINISTERING THE PROVISIONS OF THIS ACT. THE CONTRACTOR SHALL FOLLOW THE PROCEDURES DELINEATED BELOW AND CONSTRUCT AND MAINTAIN THE FACILITIES SHOWN ON THE DRAWINGS TO CONTROL WATER AND WIND EROSION DURING CONSTRUCTION OF THIS PROJECT.

ALL DISTURBED SURFACE AREA (INCLUDING UTILITY TRENCHES) SHALL BE TEMPORARILY GRADED AND/OR DITCHED TO DIRECT ALL WATER RUNOFF FROM SUCH AREAS TO SEDIMENTATION CONTROL DEVICES WHICH WILL PREVENT WATER CARRYING ERODED SOIL FROM ENTERING A WATERCOURSE, SEWER, OR ADJACENT LANDS. SUCH SEDIMENTATION TRAPS, SEDIMENT FILTERS, DITCH TRAPS, PIPE BARRIERS, AND FILTERS AS DETAILED AND REQUIRED AND WHERE INDICATED ON THE DRAWINGS. AFTER THE PROJECT WORK HAS BEEN COMPLETED, INSPECTED, AND APPROVED, THE CONTRACTOR SHALL REMOVE ALL SEDIMENTATION CONTROL DEVICES, MATERIAL, AND THEIR COLLECTED SILT AND DEBRIS AND RESTORE THE AREA IN ACCORDANCE WITH THE DRAWINGS.

IN ROADWAY AREAS TEMPORARY AGGREGATE SURFACING SHALL BE PLACED IMMEDIATELY AFTER THE BACKFILLING OPERATION HAS BEEN COMPLETED. POSITIVE DUST CONTROL MEASURES SHALL BE TAKEN AT ALL TIMES.

PERMANENT STABILIZATION SHALL BE COMPLETED WITHIN 5 DAYS OF FINAL EARTH CHANGE. FINAL CLEANUP AND RESTORATION WILL CONSIST OF FINAL GRADING, TOPSOILING, SEEDING AND MULCHING AND/OR SODDING OF ALL DISTURBED AREAS OF THE PROJECT.

IF SEASONAL CONDITIONS PREVENT FINAL CLEANING AND RESTORATION, OF THE CONTRACTOR SHALL PROCEED WITH TEMPORARY STABILIZATION OF THE DISTURBED AREA. TEMPORARY STABILIZATION SHALL CONSIST OF ROUGH GRADING THE DISTURBED AREA IN ACCORDANCE WITH THESE SPECIFICATIONS. TEMPORARY STABILIZATION MATERIALS SHALL BE REMOVED AND DISPOSED OF AND FINAL CLEANUP AND RESTORATION SHALL BE COMPLETED NOT LATER THAN 5 DAYS AFTER SEASONAL CONDITIONS ALLOW PERFORMANCE OF THE REQUIRED WORK.

CHK'D APPR DATE

PROVED BY:

J.MICHALSKI

10/2024

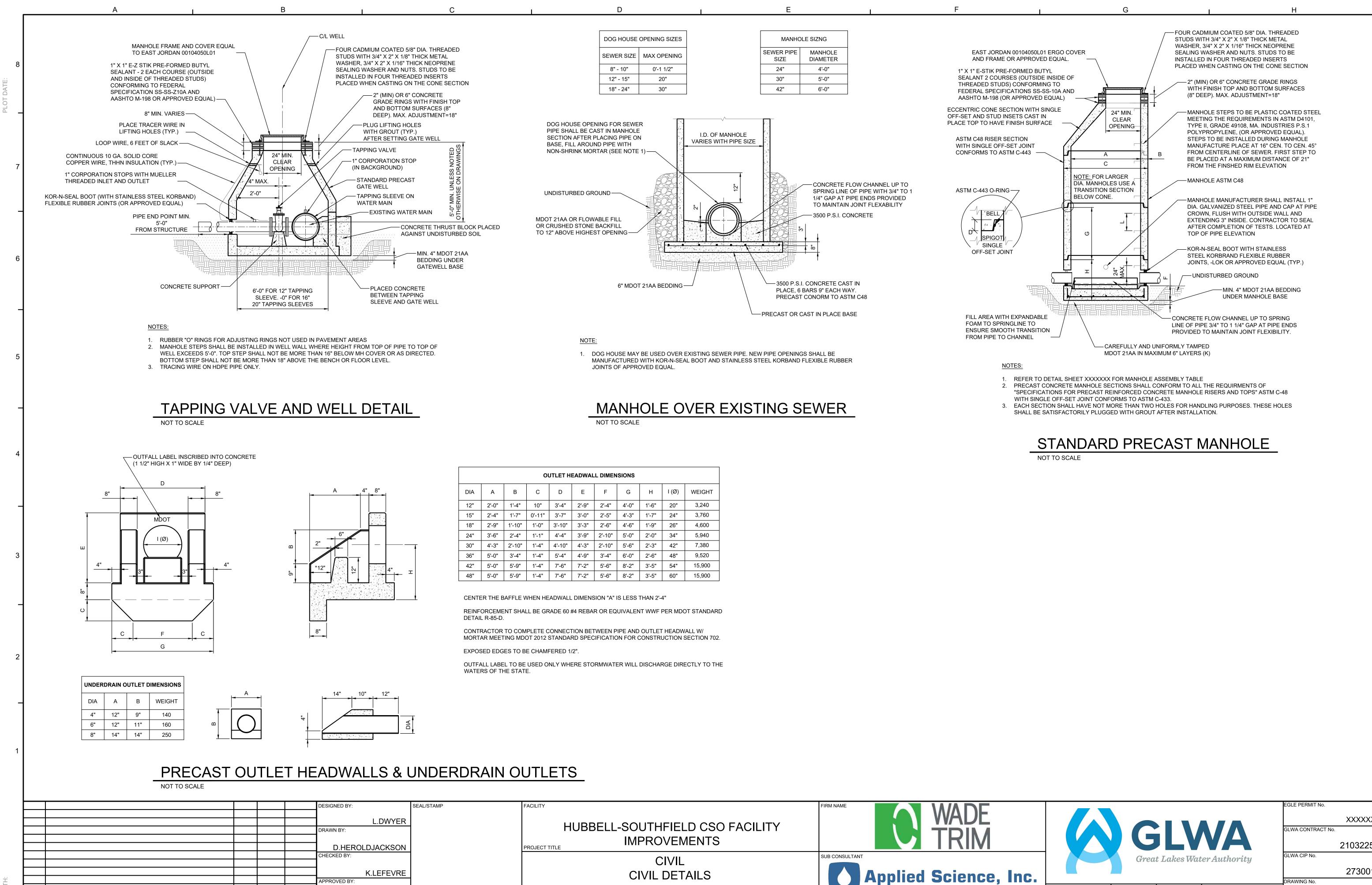
SCALE:

AS NOTED

OCTOBER 2024

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60% SUBMITTAL

DESCRIPTIONS/REVISIONS

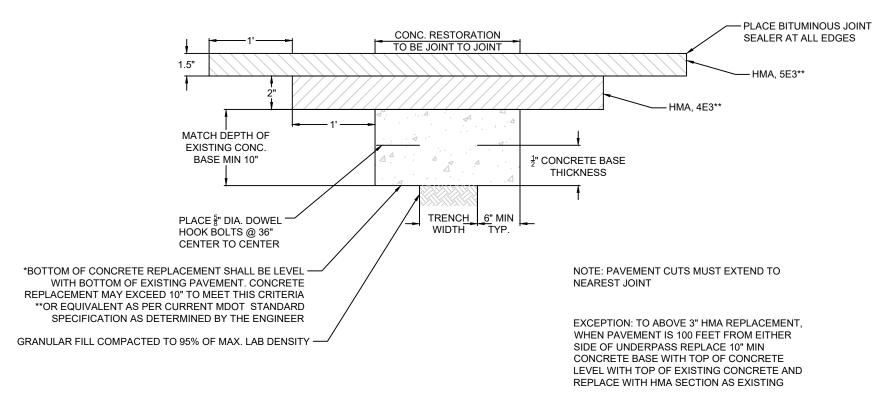
10/2024

J.MICHALSKI

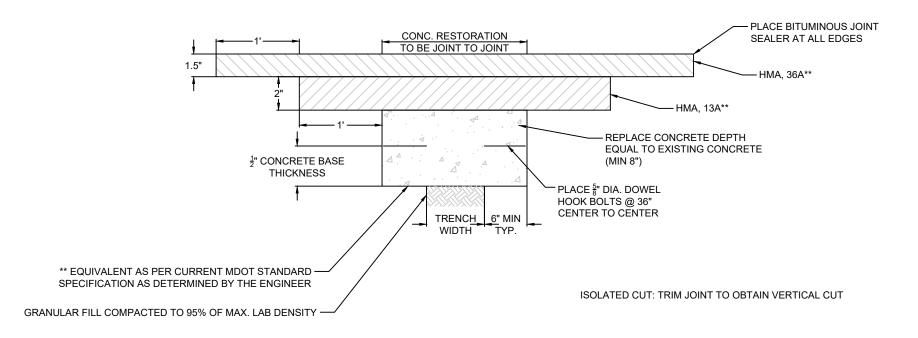
AS NOTED

CHK'D APPR DATE

MAJOR STREETS



RESIDENTIAL STREETS



UTILITY TRENCH PAVEMENT RESTORATION

NOT TO SCALE

CITY OF DETROIT NOTES

1. MILL (REMOVE) HMA PAVEMENT WITHIN AND BEYOND THE AREA OF TRENCH PAVEMENT REMOVAL IN ORDER TO DETERMINE LOCATION OF UNDERLYING CONCRETE BASE JOINTS. MILL MINIMUM TO 1' BEYOND NEAREST CONCRETE

2. EXTEND UTILITY TRENCH CONCRETE PAVEMENT REMOVAL TO ALL CONCRETE PAVEMENT JOINTS AND/OR CURBS ADJACENT TO THE TRENCH AREA.

3. CONCRETE PAVEMENT CUTS SHALL BE MINIMUM 3' WIDE.

4. ALL PAVEMENT CUTS SHALL BE MINIMUM 1' WIDER THAN TRENCH WIDTH.

5. ALL REMOVALS SHALL BE SAWCUT STRAIGHT AND SQUARE (90 DEGREES)

6. CONCRETE RESTORATION PAVEMENT SHALL BE MDOT P1 MIX (3,500 PSI) 7. RESTORED CONCRETE PAVEMENT SHALL MATCH THICKNESS OF EXISTING CONCRETE PAVEMENT IN

CONFORMANCE WITH MDOT STANDARDS DETAIL R-44-F.

8. RESTORED CONCRETE SHALL BE ANCHORED TO EXISTING CONCRETE PAVEMENT IN CONFORMANCE WITH MDOT STANDARD DETAIL R-44-F.

9. APPLY HMA TACK COAT PER MDOT STANDARD SPECIFICATIONS SECTION 904.

10. RESTORE HMA PAVEMENT 3 ½" TO MATCH EXISTING, IN 2 LIFTS:

FIRST LIFT - 2" MDOT HMA 4E3 (13A RESIDENTIAL), COMPACTED, EXTENDED 1' BEYOND BASE CONCRETE REPAIR. SECOND LIFT - 1 ½" MDOT HMA 5E3 (36A RESIDENTIAL). COMPACTED, EXTENDED 1' BEYOND FIRST LIFT.

11. BITUMOUS JOINT SEALER SHALL BE PLACED AT ALL FINISHED HMA JOINTS.

12. ALL DISTURBED PAVEMENT MARKINGS AND OTHER ASSETS, INCLUDING BIKE LANE DELINEATORS, WILL HAVE TO BEREPLACED AT THE COST OF THE PERMIT HOLDER, AND SHALL CONFORM TO THE LATEST CED/TED STANDARDS. 13. FOR OTHER RELATED SPECIFICATIONS (BACKFILL, COMPACTION, MATERIALS, ETC.) REFER TO DIVISION 15 OF THE CITY OF DETROIT STANDARD SPECIFICATIONS FOR PAVING AND RELATED CONSTRUCTION.

14. NOTIFIY THE CITY OF DETROIT ENGINEERING DEPARTMENT 24 HOURS PRIOR TO STARTING CONSTRUCTION. 15. ANY OPEN EXCAVATIONS ARE TO BE STEEL PLATED, IF EXCAVATIONS ARE IN THE PAVEMENT, THE PLATES ARE TO BE SPIKED AND RAMPED WITH COLD PATCH. CONTACT THE CITY WITH LOCATION OF THE STEEL PLATE.

16. THE CITY OF DETROIT REQUIRES ALL CONCRETE WORK TO BE STAMPED WITH CONTRACTORS IDENTIFICATION STAMP.

DESIGNED BY: D.GARLINGTON D.GARLINGTON 3 90% SUBMITTAL 12/2024 K.COOK APPROVED BY: CHK'D APPR DATE DESCRIPTIONS/REVISIONS K.COOK

HUBBELL-SOUTHFIELD CSO FACILITY IMPROVEMENTS

PROJECT TITLE CIVIL CITY OF DETROIT DETAILS



SUB CONSULTANT



GLWA CONTRACT No. 210322

> 27300° C01-505

| 12| H | | 24 | 1 OCTOBER 2024

