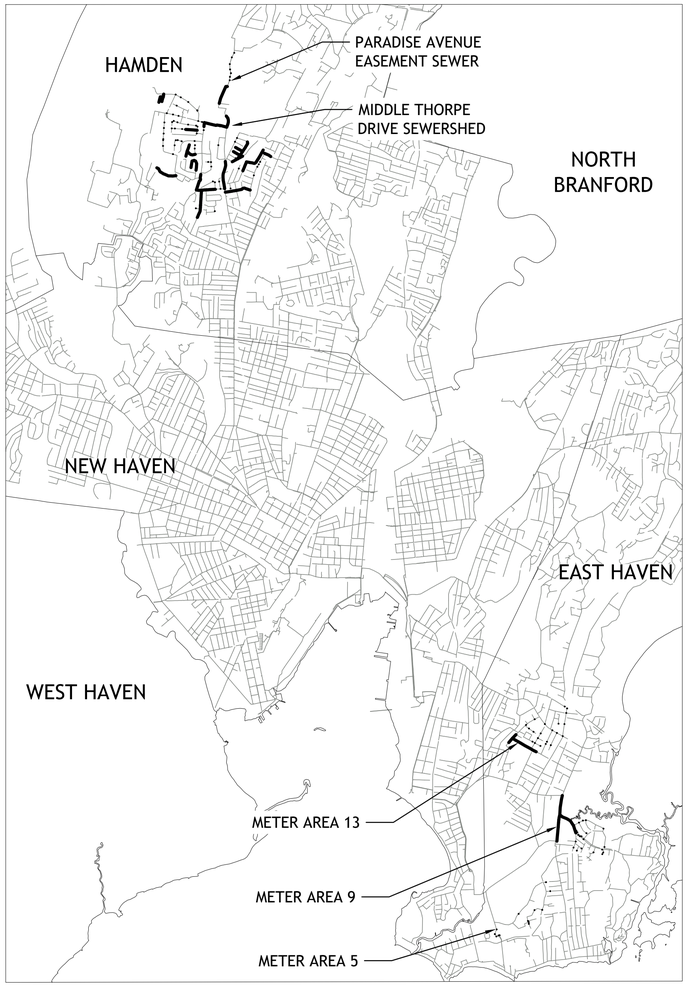

LOCATION MAP
NOT TO SCALE

GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY

SEWER SYSTEM IMPROVEMENTS TO REDUCE INFILTRATION / INFLOW

MIDDLE THORPE DRIVE SEWERSHED & UPPER THORPE DRIVE SEWERSHED (PARADISE AVENUE EASEMENT), HAMDEN AND METER AREA 5, 9 AND 13 SEWERSHEDS, EAST HAVEN

PROJECT NO. SWF 2016-06

AUGUST 2020

NOT FOR BIDDING PURPOSES
REFERENCE COPY ONLY

STATE OF CONNECTICUT
SCOTT R. HAYNES
No. 30870
LICENSED
PROFESSIONAL ENGINEER
8-5-2020

APPROVED BID SET

LEGAL ENTITY: ARCADIS U.S., INC.

ARCADIS

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DRAWING INDEX

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3	G-2	EAST HAVEN SEWERSHED SHEET INDEX
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5	C-1	SEWER ASSET REHABILITATION EAST HAVEN SHEET 1
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20	D-1	DETAILS SHEET 1
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24	D-5	DETAIL SHEET 5

GENERAL NOTES:

1. BASE MAP SHOWING EXISTING AND PROPOSED CONDITIONS IS BASED ON THE FOLLOWING SOURCES OF INFORMATION:
   - GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY (GNHWPCA) GEOGRAPHICAL INFORMATION SYSTEM (GIS) GEODATABASE.
   - "FEMA DFIRM FOR CT", DATED 12/17/2010, AVAILABLE FROM THE CT DEEP GIS DATA WEBSITE. REVISED FEMA MAPS WERE DEVELOPED ON 5/16/2017; GIS DATA NOT AVAILABLE.
   - WETLANDS DELINEATION PERFORMED BY PIETRAS ENVIRONMENTAL GROUP, LLC. IN DECEMBER OF 2016.
   - EXISITING INFORMATION AVAILABLE ON THE CT DEEP GIS DATA WEBSITE.
2. LOCATIONS OF SEWER MAINS AND SEWER MANHOLES ARE APPROXIMATE. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL SIZES, LENGTHS AND DIMENSIONS PRIOR TO STARTING WORK.
3. THERE ARE OTHER UNDERGROUND UTILITIES NOT SHOWN ON THE DRAWINGS. CONTRACTOR SHALL CALL "CALL BEFORE YOU DIG" AT (203) 281-5435 AND ALL UTILITY OWNERS TO MARK ALL UNDERGROUND UTILITIES PRIOR TO ANY EXCAVATION. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT ALL UTILITIES ENCOUNTERED.
4. THE CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS TO THEIR ORIGINAL CONDITION. INSTALL NEW PAVEMENT IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND PRE-CONSTRUCTION CONDITIONS.
5. WHERE CONSTRUCTION ACTIVITY IS TO TAKE PLACE IN TRAVELED WAYS, THE CONTRACTOR SHALL PERFORM HIS WORK IN A MANNER ACCEPTABLE TO THE AUTHORITY AND IN ACCORDANCE WITH TRAFFIC CONTROL PLANS AND CTDOT PERMITS SO THAT INTERFERENCE WITH AND INCONVENIENCE TO BUSINESS CONCERNS AND ABUTTERS ON ACCOUNT OF THE CONSTRUCTION WORK IS INCONSEQUENTIAL. THE CONTRACTOR WILL NOT BE ALLOWED TO PARK EQUIPMENT OR STOCKPILE MATERIAL ON THE TRAVELED WAYS OVERNIGHT OR WHEN NOT IN USE. THE CONTRACTOR SHALL MAINTAIN SAFE AND REASONABLE INGRESS TO EGRESS FROM ABUTTING PROPERTIES AT ALL TIMES. NO UNPLATED EXCAVATIONS IN TRAVELED WAYS WILL BE ALLOWED TO REMAIN OVERNIGHT, UNLESS AUTHORIZED BY CTDOT OR MUNICIPAL PERMITS.
6. STAGING AREAS DESIRED BY THE CONTRACTOR WILL BE ACQUIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE AUTHORITY. ANY STAGING AREAS SHALL BE REVIEWED BY THE AUTHORITY.
7. CONTRACTOR PERSONNEL WORKING WITHIN OSHA DEFINED CONFINED SPACES TO BE CONFINED SPACE TRAINED.
8. THE CONTRACTOR SHALL PROVIDE FOR THE HANDLING OF EXISTING FLOWS IN ACCORDANCE WITH THE SPECIFICATIONS. THE EXISTING SEWERS HAVE ACTIVE FLOWS, AND THE CONTRACTOR SHALL MAINTAIN CONTINUOUS FLOW WITHOUT RESTRICTIONS.
9. CONTRACTOR SHALL NOTIFY GNHWPCA AT LEAST FOURTEEN (14) DAYS IN ADVANCE FOR COORDINATION OF TEMPORARY PUMP STATION SHUTDOWN, IF REQUIRED.
10. CONTRACTOR SHALL PROVIDE A MINIMUM OF TWENTY-FOUR (24) HOURS WRITTEN NOTICE TO GNHWPCA IDENTIFYING WHAT AREAS WILL HAVE FLOWS BYPASSED ON A GIVEN DATE.

ENVIRONMENTAL NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING EROSION CONTROL DEVICES DURING CONSTRUCTION WHERE INDICATED ON THE CONTRACT DOCUMENTS OR AS DIRECTED BY THE AUTHORITY OR ENGINEER.
2. CONTRACTOR SHALL STAKE OUT LIMITS OF APPROVED SELECTIVE CUTTING PRIOR TO STARTING WORK. CONTRACTOR SHALL CONTACT THE APPROPRIATE STATE AND/OR MUNICIPAL INLAND WETLANDS AND WATERCOURSES AGENCY STAFF AND ENGINEER FOR FIELD INSPECTION OF LIMITS OF SELECTIVE CUTTING AND IDENTIFICATION OF ANY TREES TO REMAIN OR TO BE REMOVED PRIOR TO STARTING ANY SELECTIVE CUTTING.
3. SELECTIVE CUTTING INCLUDES THE REMOVAL AND DISPOSAL OF TREES, SHRUBS, VEGETATION AND LOGS. NO GRUBBING OR REMOVAL OF TOP SOIL SHALL BE ALLOWED WITHIN THE 100-YEAR FLOOD PLAIN. ROOT OR STUMP REMOVAL AND SOIL DISTURBANCE SHALL BE MINIMIZED.
4. ALL DEBRIS IS TO BE REMOVED FROM SITE AND DISPOSED OF PROPERLY IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS. NO DEBRIS IS TO REMAIN ON SITE.
5. CONTRACTOR SHALL MINIMIZE ANY ACTIVITIES LOCATED WITHIN THE DRIPLINES OF EXISTING TREES.
6. EROSION AND SEDIMENT CONTROLS SHALL BE PLACED AS SHOWN AND AS NECESSARY, OR AT LOCATIONS AS DIRECTED BY THE AUTHORITY, THE ENGINEER OR BY TOWN AGENCIES HAVING JURISDICTION TO CONTROL THE MOVEMENT OF SEDIMENT.
7. ALL SOIL EROSIONS AND SEDIMENT CONTROL PRACTICES WILL BE INSTALLED IN ACCORDANCE WITH THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN CONNECTICUT AND THE "CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL", MAY 2002 (AND ALL AMENDMENTS) BY THE CONNECTICUT COUNCIL ON SOIL AND WATER CONSERVATION IN COOPERATION WITH THE CONNECTICUT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION. INSTALL ALL SOIL EROSION AND SEDIMENT CONTROLS IN ACCORDANCE WITH THE SPECIFICATIONS PRIOR TO EXCAVATION FOR MANHOLES TO BE RESET TO GRADE OR FOR MANHOLE FRAME AND COVER REPLACEMENTS.
8. STOCKPILES ARE NOT TO BE LOCATED WITHIN 50 FEET OF A FLOODPLAIN, SLOPE, ROADWAYS, OR DRAINAGE FACILITY. THE BASE OF ALL STOCKPILES SHALL BE CONTAINED BE A TUBULAR SEDIMENT CONTROL TRAP.
9. UPON COMPLETION OF THE WORK, IF THE SEASON PREVENTS THE ESTABLISHMENT OF A PERMANENT COVER, THE AREA TO BE RESTORED WILL BE TEMPORARILY SEEDED IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS.
10. AT THE TIME WHEN THE SITE PREPARATION FOR PERMANENT VEGETATIVE STABILIZATION IS GOING TO BE ACCOMPLISHED, ANY SOIL THAT WILL NOT PROVIDE A SUITABLE ENVIRONMENT TO SUPPORT ADEQUATE VEGETATIVE GROUND COVER SHALL BE REMOVED OR TREATED IN SUCH A WAY THAT WILL PERMANENTLY ADJUST THE SOIL CONDITIONS AND RENDER THEM SUITABLE FOR VEGETATIVE GROUND COVER. IF THE REMOVAL OR TREATMENT OF THE SOIL WILL NOT PROVIDE SUITABLE CONDITIONS, NON-VEGETATIVE MEANS OF PERMANENT GROUND STABILIZATION SHALL BE EMPLOYED.
11. PERMANENT GRASS MIX IN NON-WETLAND EASEMENT AREAS SHALL BE SELECTED IN ACCORDANCE WITH GRASS SEED MIXTURES FOR "WOODLAND ACCESS ROADS, SKID TRAILS, AND LOGGING AREAS AS DEFINED IN THE "CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL".
12. WATER FROM DEWATERING OPERATIONS SHALL BE DISCHARGED INTO A DEWATERING BAG PRIOR TO A SURFACE WATER BODY.
13. PREVENTATIVE AND CONTAINMENT MEASURES SHALL BE TAKEN TO AVOID SPILLAGE AND RELEASE OF PETROLEUM PRODUCTS AND OTHER POLLUTANTS. IN THE EVENT OF ANY SPILLAGE, PROMPT REMEDIAL ACTION SHALL BE TAKEN IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS.
14. WHERE TREES THAT REMAIN MAY POSSIBLY BE DEFACED, BRUISED, INJURED OR DAMAGED BY THE CONTRACTOR'S EQUIPMENT OR OTHER OPERATIONS, ADEQUATE PROTECTION SHALL BE MADE AROUND THEM. MONUMENTS AND MARKERS SHALL BE PROTECTED SIMILARLY BEFORE BEGINNING OPERATIONS NEAR THEM. ANY TREES THAT ARE DAMAGED SHALL BE REPLACED IN-KIND, WHERE DIRECTED BY ENGINEER.
15. FOLLOWING COMPLETION OF THE WORK, CONTRACTOR SHALL ELIMINATE ALL SIGNS OF TEMPORARY CONSTRUCTION FACILITIES AS DIRECTED BY THE ENGINEER OR AUTHORITY.
16. ANY GROUND IMPROVEMENTS MADE FOR EQUIPMENT ACCESS, OUTSIDE OF THE 100-YEAR FLOODPLAIN AND INLAND WETLANDS, ARE TO REMAIN FOR FUTURE SEWER MAINTENANCE PURPOSES.
17. ALL FACILITIES CONSTRUCTED FOR EROSION CONTROL SHALL BE MAINTAINED FOR THE FULL EXTENT OF THE WORK.
18. STORAGE OF EQUIPMENT, CONSTRUCTION MATERIAL OR EXCAVATION MATERIAL IS PROHIBITED IN REGULATED AREAS. CONTRACTOR SHALL PROVIDE AND MAINTAIN SPILL CONTAINMENT AND EROSION CONTROL AS DIRECTED BY THE ENGINEER OR PROVIDE A MINIMUM DISTANCE BETWEEN REGULATED AREAS AND CONTRACTOR STORAGE AREAS OF 200 FEET. REGULATED AREAS INCLUDE WETLANDS AND THE 100-YEAR FLOOD PLAIN.
19. EQUIPMENT FUELING SHALL BE PERFORMED WITHIN A SPILL CONTAINMENT AREA, OR AT A MINIMUM OF 200 FEET FROM REGULATED AREAS AS APPROVED BY THE ENGINEER OR AUTHORITY.
20. PORTIONS OF THE WORK MAY FLOOD DURING DIFFERENT TIMES OF THE YEAR. CONTRACTOR SHALL COORDINATE THE WORK ACCORDINGLY.
21. ALL WORK SHALL BE CONDUCTED IN ACCORDANCE WITH INLAND WETLANDS AND WATERCOURSES PERMITS AND ANY OTHER PERMITS OBTAINED BY THE OWNER. CONTRACTOR SHALL COMPLY WITH ALL PERMITS AND CONDITIONS.
22. ALL WORK SHALL BE CONDUCTED IN ACCORDANCE WITH ALL PERMITS INCLUDING THE GENERAL CONDITIONS AND REQUIREMENTS OF THE DEPARTMENT OF THE ARMY GENERAL PERMITS FOR THE STATE OF CONNECTICUT.

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ARCADIS

LEGAL ENTITY:
ARCADIS U.S., INC.

CONSULTANTS

SEALS

STATE OF CONNECTICUT
SCOTT R. HAYDEN
No. 32837
LICENSED PROFESSIONAL ENGINEER
8-5-2020

EAST HAVEN AND HAMDEN, CONNECTICUT

GNHWPCA

SEWER SYSTEM IMPROVEMENTS TO REDUCE INFILTRATION/INFLOW

CONTRACT NO.
CWF 2016-06

NO.	DATE	ISSUED FOR	BY

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DATE: AUGUST 2020
PROJECT NO.: 05654065.0000
FILE NAME: BID SET
DESIGNED BY: SPM
DRAWN BY: SPM
CHECKED BY: SRH

SHEET TITLE

DRAWING INDEX AND GENERAL AND ENVIRONMENTAL NOTES

SCALE: NOT TO SCALE

G-1

SHEET 2 OF 24

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LEGEND

- EXISTING SANITARY SEWER
- SANITARY SEWER TO BE REHABILITATED WITH CURED-IN-PLACE PIPE LINING (CIPPL)
- EXISTING SANITARY MANHOLE
- SANITARY MANHOLE TO BE REHABILITATED (SEE MANHOLE REHABILITATION SCHEDULE FOR SPECIFIC REHABILITATION)
- EXISTING SANITARY LATERAL
- SANITARY SEWER EASEMENT
- FLOW DIRECTION
- WATERCOURSE
- WETLANDS
- FEMA 100-YEAR FLOODPLAIN
- SANITARY SEWER EASEMENT

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LEGAL ENTITY:
ARCADIS U.S., INC.

CONSULTANTS

SEALS

STATE OF CONNECTICUT
SCOTT R. HAYES
No. 33631
LICENSED PROFESSIONAL ENGINEER
8-5-2020

EAST HAVEN AND HAMDEN, CONNECTICUT

GNHWPCA

SEWER SYSTEM IMPROVEMENTS TO REDUCE INFILTRATION/INFLOW

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CWF 2016-06

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SHEET TITLE

EAST HAVEN SEWERSHED
SHEET INDEX

SCALE: NOT TO SCALE

G-2

SHEET 3 OF 24

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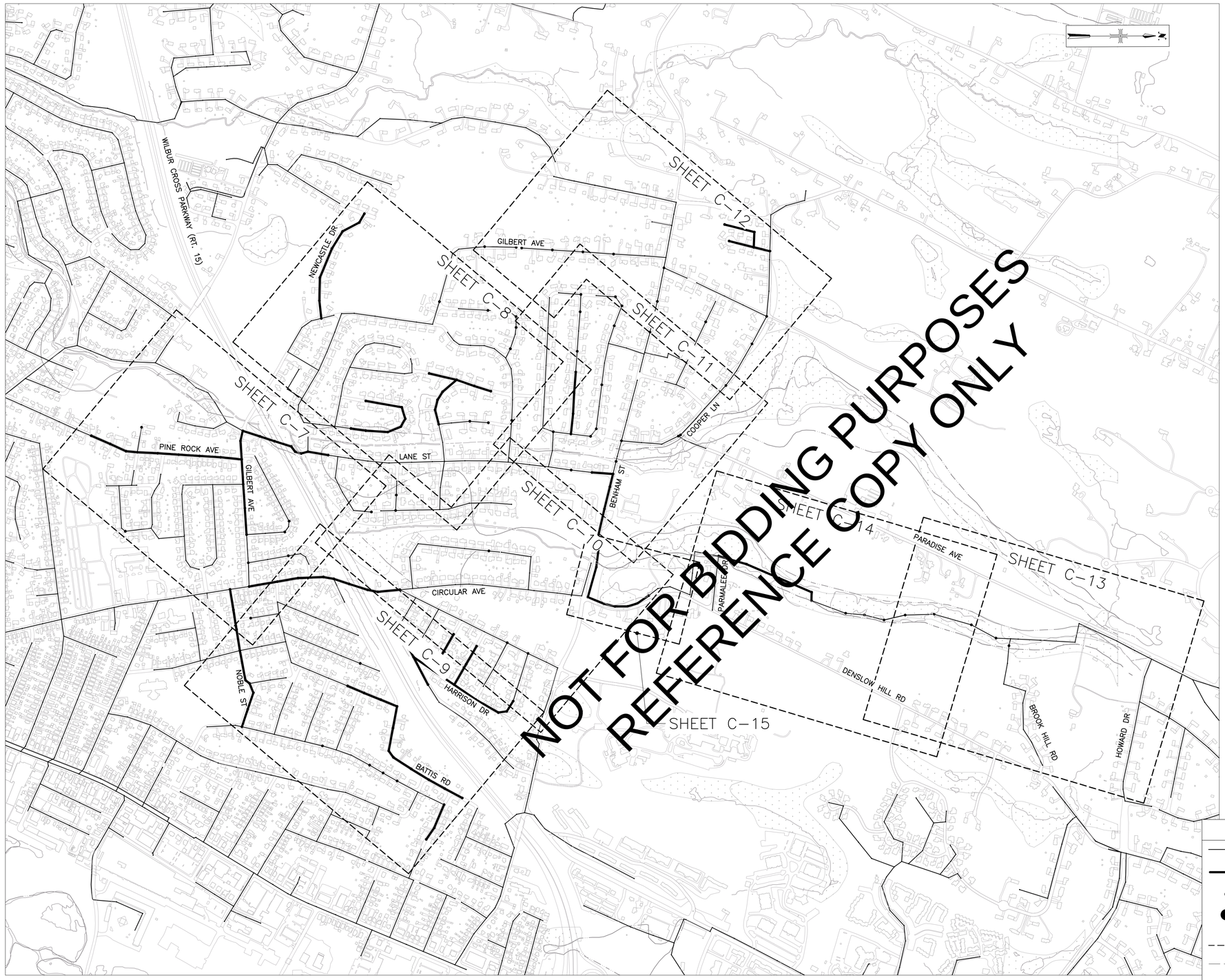

LEGEND

- EXISTING SANITARY SEWER
- SANITARY SEWER TO BE REHABILITATED WITH CURED-IN-PLACE PIPE LINING (CIPPL)
- EXISTING SANITARY MANHOLE
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- SANITARY SEWER EASEMENT
- FLOW DIRECTION
- WATERCOURSE
- WETLANDS
- FEMA 100-YEAR FLOODPLAIN
- SANITARY SEWER EASEMENT

ARCADIS

LEGAL ENTITY:
ARCADIS U.S., INC.

CONSULTANTS

SEALS

STATE OF CONNECTICUT
SCOTT R. HAYNES
No. 30970
LICENSED
PROFESSIONAL ENGINEER
8-5-2020

EAST HAVEN AND HAMDEN, CONNECTICUT

GNHWPCA

SEWER SYSTEM IMPROVEMENTS TO REDUCE INFILTRATION/INFLOW

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SHEET TITLE

HAMDEN SEWERSHED SHEET INDEX

SCALE: NOT TO SCALE

G-3

SHEET 4 OF 24

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CONSULTANTS

SEALS

STATE OF CONNECTICUT
SCOTT R. HAYNES
No. 30830
LICENSED
PROFESSIONAL ENGINEER
8-5-2020

EAST HAVEN AND HAMDEN, CONNECTICUT

GNHWPCA

SEWER SYSTEM IMPROVEMENTS TO REDUCE INFILTRATION/INFLOW

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SHEET TITLE

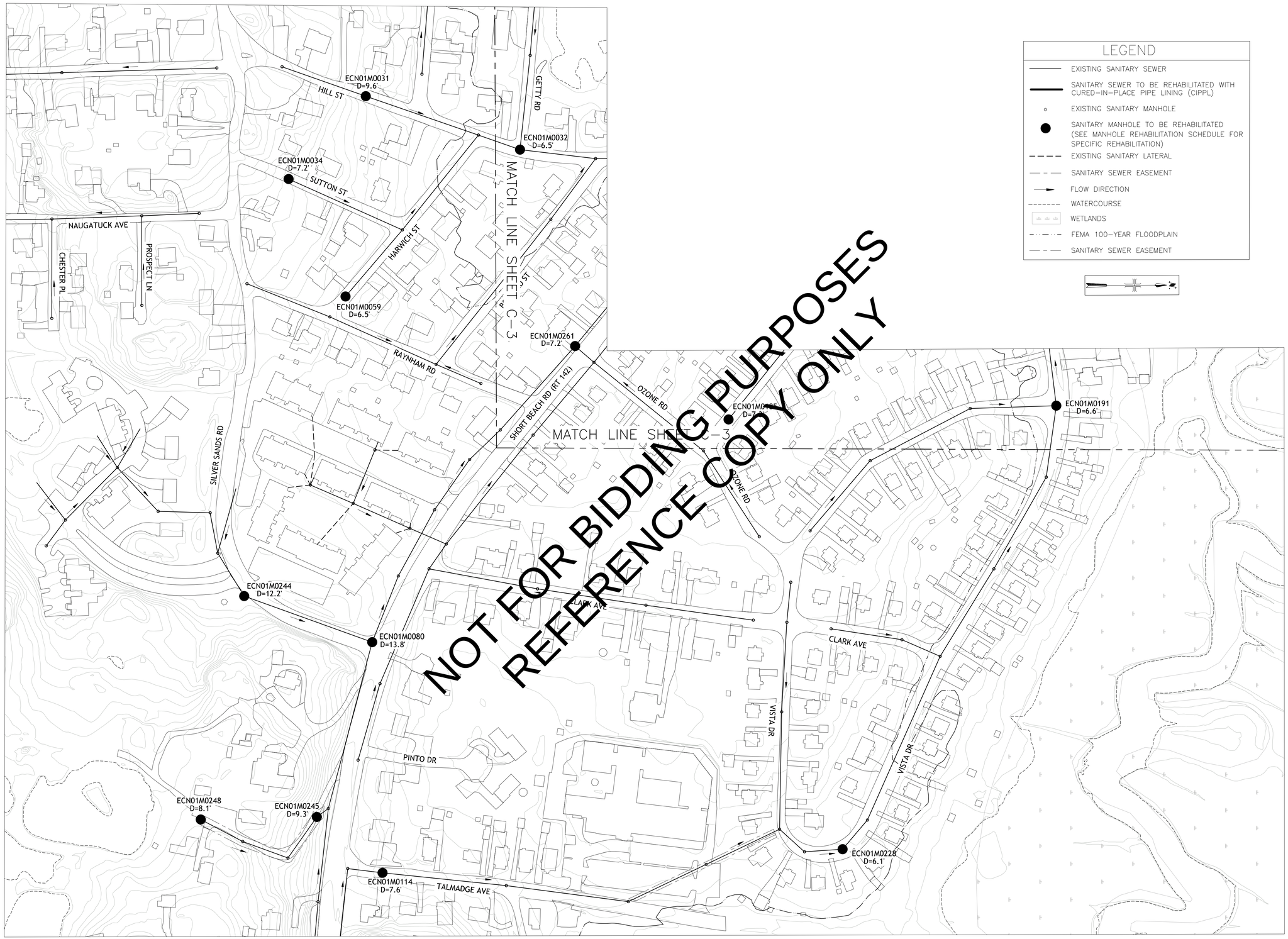
SEWER ASSET REHABILITATION
EAST HAVEN SHEET 1

SCALE: AS SHOWN

C-1

SHEET 5 OF 24

User: SMITCHELL Spec: AUS-NCSMOD File: Q:\CAD\CACAD\PROJ\05654065.0000 - EH&H SEWER REHAB\BID SET\BID SET DESIGN PLANS - CWF2016-06.DWG Scale:1:1 SavedDate:7/24/2020 Time:10:34 Plot Date: Mitchell, Sean; 7/24/2020; 11:44 ; Layout:C-1



LEGEND

- EXISTING SANITARY SEWER
- SANITARY SEWER TO BE REHABILITATED WITH CURED-IN-PLACE PIPE LINING (CIPPL)
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- SANITARY SEWER EASEMENT
- FLOW DIRECTION
- WATERCOURSE
- WETLANDS
- FEMA 100-YEAR FLOODPLAIN
- SANITARY SEWER EASEMENT

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STATE OF CONNECTICUT
SCOTT R. HAYNES
No. 30930
LICENSED PROFESSIONAL ENGINEER
8-5-2020

EAST HAVEN AND HAMDEN, CONNECTICUT

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SHEET TITLE

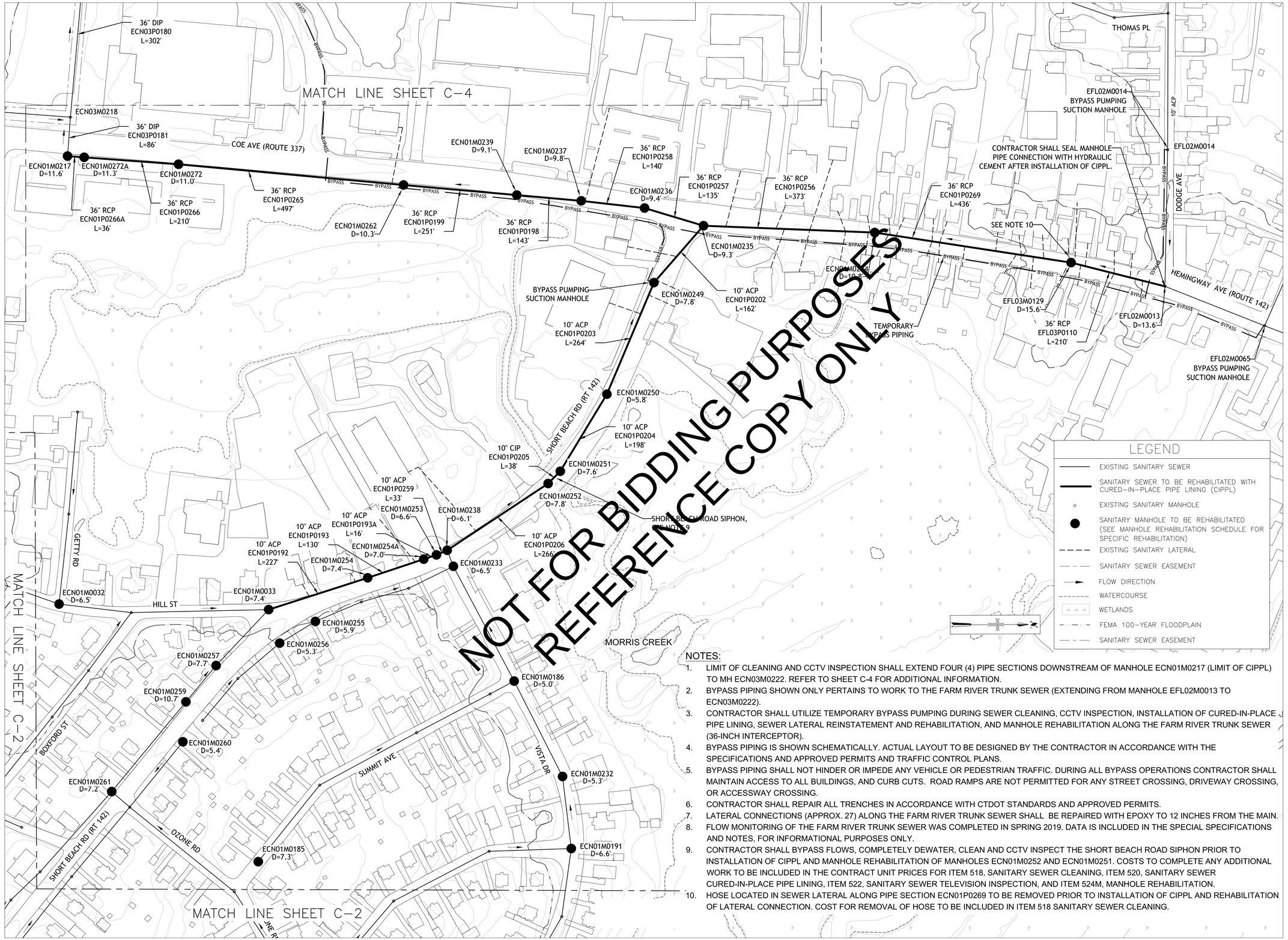
SEWER ASSET REHABILITATION
EAST HAVEN SHEET 2

SCALE:
AS SHOWN

C-2

SHEET 6 OF 24

User:SMITCHELL Spec:AUS-NCSMOD File:G:\CAD\ACAD\PROJ\05654065.0000 - EH&H SEWER REHAB\BID SET\BID SET DESIGN PLANS - CWF2016-06.DWG Scale:1:1 SavedDate:7/24/2020 Time:10:34 Plot Date: Mitchell, Sean; 7/24/2020; 11:45 ; Layout:C-2



NOTES:

1. LIMIT OF CLEANING AND CCTV INSPECTION SHALL EXTEND FOUR (4) PIPE SECTIONS DOWNSTREAM OF MANHOLE ECN01M0217 (LIMIT OF CIPPL) TO MH ECN03M0222. REFER TO SHEET C-4 FOR ADDITIONAL INFORMATION.
2. BYPASS PIPING SHOWN ONLY PERTAINS TO WORK TO THE FARM RIVER TRUNK SEWER (EXTENDING FROM MANHOLE EFL02M0013 TO ECN03M0222).
3. CONTRACTOR SHALL UTILIZE TEMPORARY BYPASS PUMPING DURING SEWER CLEANING, CCTV INSPECTION, INSTALLATION OF CURED-IN-PLACE PIPE LINING, SEWER LATERAL REINSTATEMENT AND REHABILITATION, AND MANHOLE REHABILITATION ALONG THE FARM RIVER TRUNK SEWER (36-INCH INTERCEPTOR).
4. BYPASS PIPING IS SHOWN SCHEMATICALLY. ACTUAL LAYOUT TO BE DESIGNED BY THE CONTRACTOR IN ACCORDANCE WITH THE SPECIFICATIONS AND APPROVED PERMITS AND TRAFFIC CONTROL PLANS.
5. BYPASS PIPING SHALL NOT HINDER OR IMPEDE ANY VEHICLE OR PEDESTRIAN TRAFFIC. DURING ALL BYPASS OPERATIONS CONTRACTOR SHALL MAINTAIN ACCESS TO ALL BUILDINGS, AND CURB CUTS. ROAD RAMPS ARE NOT PERMITTED FOR ANY STREET CROSSING, DRIVEWAY CROSSING, OR ACCESSWAY CROSSING.
6. CONTRACTOR SHALL REPAIR ALL TRENCHES IN ACCORDANCE WITH CTDOT STANDARDS AND APPROVED PERMITS.
7. LATERAL CONNECTIONS (APPROX. 27) ALONG THE FARM RIVER TRUNK SEWER SHALL BE REPAIRED WITH EPOXY TO 12 INCHES FROM THE MAIN.
8. FLOW MONITORING OF THE FARM RIVER TRUNK SEWER WAS COMPLETED IN SPRING 2019. DATA IS INCLUDED IN THE SPECIAL SPECIFICATIONS AND NOTES, FOR INFORMATIONAL PURPOSES ONLY.
9. CONTRACTOR SHALL BYPASS FLOWS, COMPLETELY DEWATER, CLEAN AND CCTV INSPECT THE SHORT BEACH ROAD SIPHON PRIOR TO INSTALLATION OF CIPPL AND MANHOLE REHABILITATION OF MANHOLES ECN01M0252 AND ECN01M0251. COSTS TO COMPLETE ANY ADDITIONAL WORK TO BE INCLUDED IN THE CONTRACT UNIT PRICES FOR ITEM 518, SANITARY SEWER CLEANING, ITEM 520, SANITARY SEWER CURED-IN-PLACE PIPE LINING, ITEM 522, SANITARY SEWER TELEVISION INSPECTION, AND ITEM 524M, MANHOLE REHABILITATION.
10. HOSE LOCATED IN SEWER LATERAL ALONG PIPE SECTION ECN01P0269 TO BE REMOVED PRIOR TO INSTALLATION OF CIPPL AND REHABILITATION OF LATERAL CONNECTION. COST FOR REMOVAL OF HOSE TO BE INCLUDED IN ITEM 518 SANITARY SEWER CLEANING.

ARCADIS

LEGAL ENTITY:
ARCADIS U.S., INC.

CONSULTANTS

SEALS

STATE OF CONNECTICUT SCOTT R. HAINES No. 30970 LICENSED PROFESSIONAL ENGINEER 8-5-2020

EAST HAVEN AND HAMDEN, CONNECTICUT

GNHWPCA

SEWER SYSTEM IMPROVEMENTS TO REDUCE INFILTRATION/INFLOW

CONTRACT NO. CWF 2016-06

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FILE NAME: BID SET
DESIGNED BY: SPM
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SHEET TITLE

SEWER ASSET REHABILITATION
EAST HAVEN SHEET 3

SCALE: AS SHOWN

C-3

SHEET 7 OF 24

User:SMITCHELL Spec:AUS-NCSM00 File:G:\CADD\ACAD\PROJ\05654065.0000 - EHWH SEWER REHAB\BID SET\BID SET DESIGN PLANS - CWF2016-06.DWG Scale:1:1 SavedDate:7/24/2020 Time:10:34 Plot Date: Mitchell, Sean, 7/24/2020, 11:46 ; Layout:C-3

NOTES:

1. LIMIT OF CLEANING AND CCTV INSPECTION SHALL EXTEND FOUR (4) PIPE SECTIONS DOWNSTREAM OF MANHOLE ECN01M0217 (LIMIT OF CIPPL) TO MH ECN03M0222. REFER TO SHEET C-4 FOR ADDITIONAL INFORMATION.
2. BYPASS PIPING SHOWN ONLY PERTAINS TO WORK TO THE FARM RIVER TRUNK SEWER (EXTENDING FROM MANHOLE EFL02M0013 TO ECN03M0222).
3. CONTRACTOR SHALL UTILIZE TEMPORARY BYPASS PUMPING DURING SEWER CLEANING, CCTV INSPECTION, INSTALLATION OF CURED-IN-PLACE PIPE LINING, SEWER LATERAL REINSTATEMENT AND REHABILITATION, AND MANHOLE REHABILITATION ALONG THE FARM RIVER TRUNK SEWER (36-INCH INTERCEPTOR).
4. BYPASS PIPING IS SHOWN SCHEMATICALLY. ACTUAL LAYOUT TO BE DESIGNED BY THE CONTRACTOR IN ACCORDANCE WITH THE SPECIFICATIONS AND APPROVED PERMITS AND TRAFFIC CONTROL PLANS.
5. BYPASS PIPING SHALL NOT HINDER OR IMPEDE ANY VEHICLE OR PEDESTRIAN TRAFFIC. DURING ALL BYPASS OPERATIONS CONTRACTOR SHALL MAINTAIN ACCESS TO ALL BUILDINGS, AND CURB CUTS. ROAD RAMPS ARE NOT PERMITTED FOR ANY STREET CROSSING, DRIVEWAY CROSSING, OR ACCESSWAY CROSSING.
6. CONTRACTOR SHALL REPAIR ALL TRENCHES IN ACCORDANCE WITH CTDOT STANDARDS AND APPROVED PERMITS.
7. LATERAL CONNECTIONS (APPROX. 27) ALONG THE FARM RIVER TRUNK SEWER SHALL BE REPAIRED WITH EPOXY TO 12 INCHES FROM THE MAIN.
8. FLOW MONITORING OF THE FARM RIVER TRUNK SEWER WAS COMPLETED IN SPRING 2019. DATA IS INCLUDED IN THE SPECIAL SPECIFICATIONS AND NOTES, FOR INFORMATIONAL PURPOSES ONLY.

50 0 50 100
SCALE: 1" = 100'

LEGEND

- EXISTING SANITARY SEWER
- SANITARY SEWER TO BE REHABILITATED WITH CURED-IN-PLACE PIPE LINING (CIPPL)
- EXISTING SANITARY MANHOLE
- SANITARY MANHOLE TO BE REHABILITATED (SEE MANHOLE REHABILITATION SCHEDULE FOR SPECIFIC REHABILITATION)
- EXISTING SANITARY LATERAL
- SANITARY SEWER EASEMENT
- FLOW DIRECTION
- WATERCOURSE
- WETLANDS
- FEMA 100-YEAR FLOODPLAIN
- SANITARY SEWER EASEMENT

ARCADIS

LEGAL ENTITY:
ARCADIS U.S., INC.

CONSULTANTS

SEALS

STATE OF CONNECTICUT
SCOTT R. HAYNES
No. 30931
LICENSED
PROFESSIONAL ENGINEER
8-5-2020

EAST HAVEN AND HAMDEN, CONNECTICUT

GNHWPCA

SEWER SYSTEM IMPROVEMENTS TO REDUCE INFILTRATION/INFLOW

CONTRACT NO.
CWF 2016-06

NO.	DATE	ISSUED FOR	BY

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DATE: AUGUST 2020
PROJECT NO.: 05654065.0000
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SHEET TITLE

SEWER ASSET REHABILITATION
EAST HAVEN SHEET 4

SCALE:
AS SHOWN

C-4

SHEET 8 OF 24

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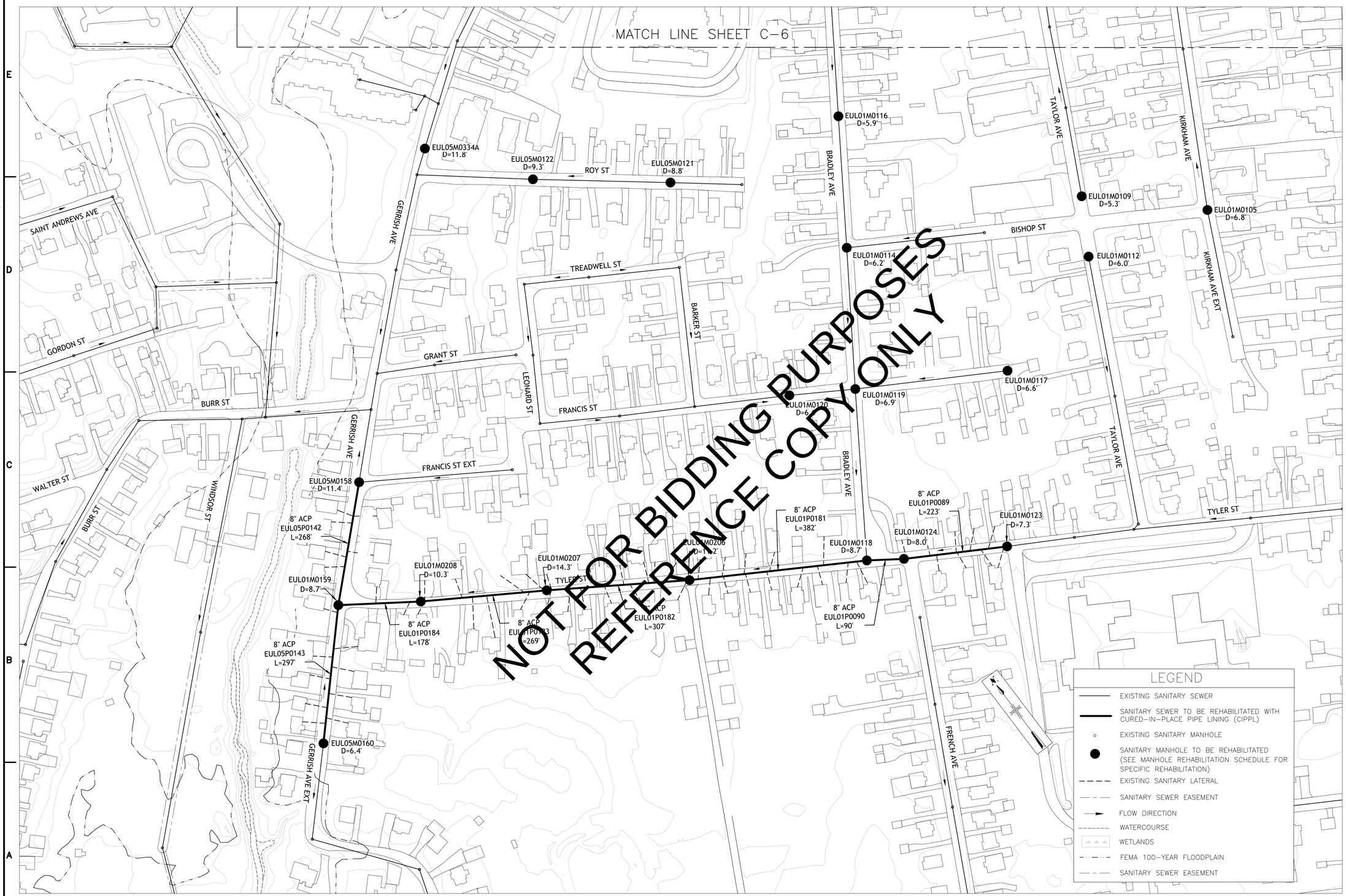

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CONSULTANTS

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STATE OF CONNECTICUT
SCOTT R. HAYNES
No. 30920
LICENSED
PROFESSIONAL ENGINEER
8-5-2020

EAST HAVEN AND HAMDEN, CONNECTICUT

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SHEET TITLE

SEWER ASSET REHABILITATION
EAST HAVEN SHEET 5

SCALE: AS SHOWN

C-5

SHEET 9 OF 24

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50 0 50 100
SCALE: 1" = 100'

ARCADIS

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CONSULTANTS

SEALS

STATE OF CONNECTICUT
SCOTT R. HAYNES
No. 30930
LICENSED PROFESSIONAL ENGINEER
8-5-2020

EAST HAVEN AND HAMDEN, CONNECTICUT

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SHEET TITLE

SEWER ASSET REHABILITATION
EAST HAVEN SHEET 6

SCALE:
AS SHOWN

C-6

SHEET 10 OF 24

User: SMITCHELL Spec: AUS-NCSM00 File: G:\CAD\ACAD\PROJ\05654065.0000 - EHHH SEWER REHAB\BID SET\BID SET DESIGN PLANS - CWF2016-06.DWG Scale: 1:1 SavedDate: 7/24/2020 Time: 10:34 Plot Date: Mitchell, Sean, 7/24/2020, 11:49 ; Layout: C-6

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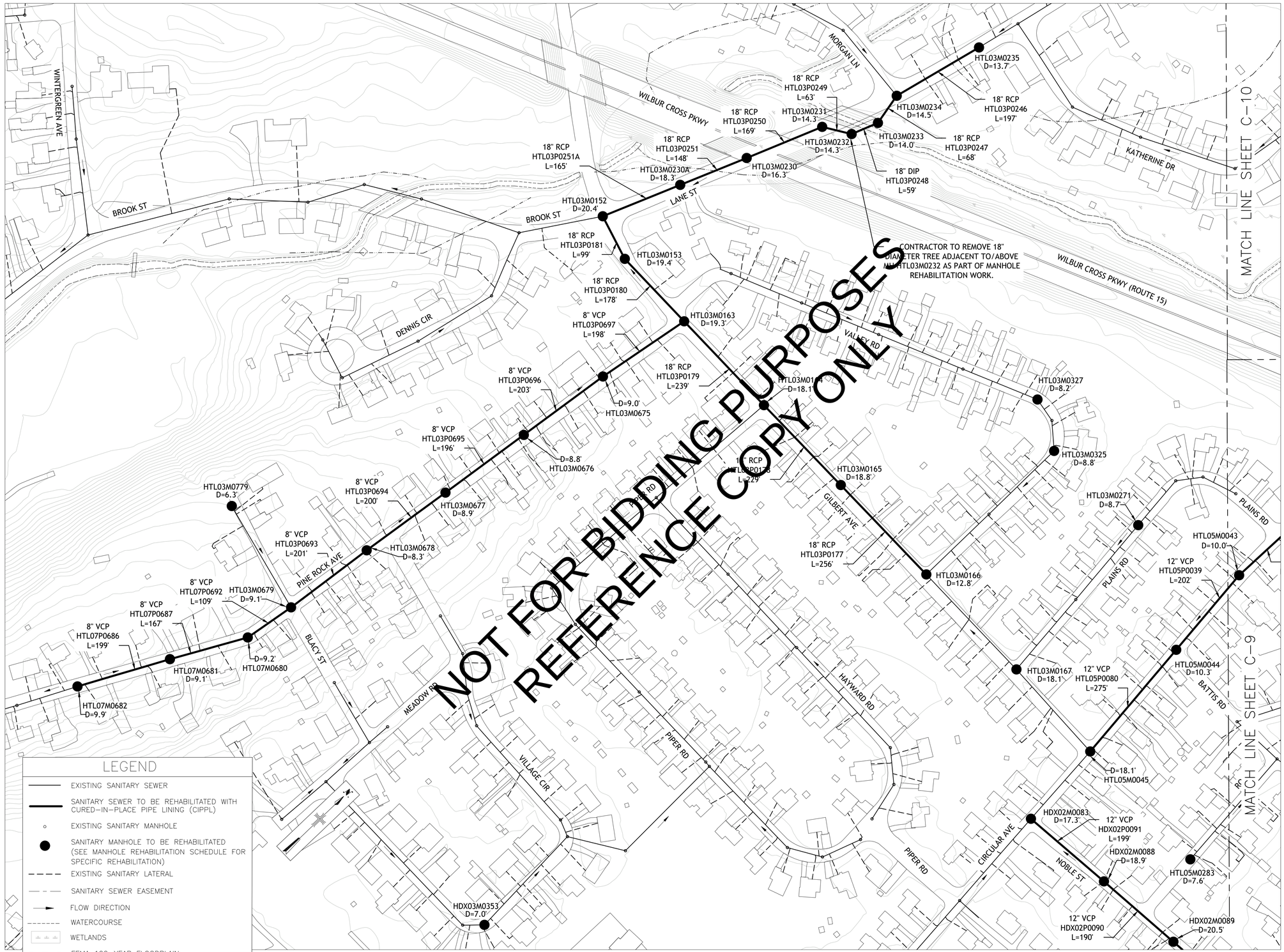

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STATE OF CONNECTICUT
SCOTT R. HAYNES
No. 30931
LICENSED PROFESSIONAL ENGINEER
8-5-2020

EAST HAVEN AND HAMDEN, CONNECTICUT

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SHEET TITLE

SEWER ASSET REHABILITATION
HAMDEN SHEET 1

SCALE: AS SHOWN

C-7

SHEET 11 OF 24

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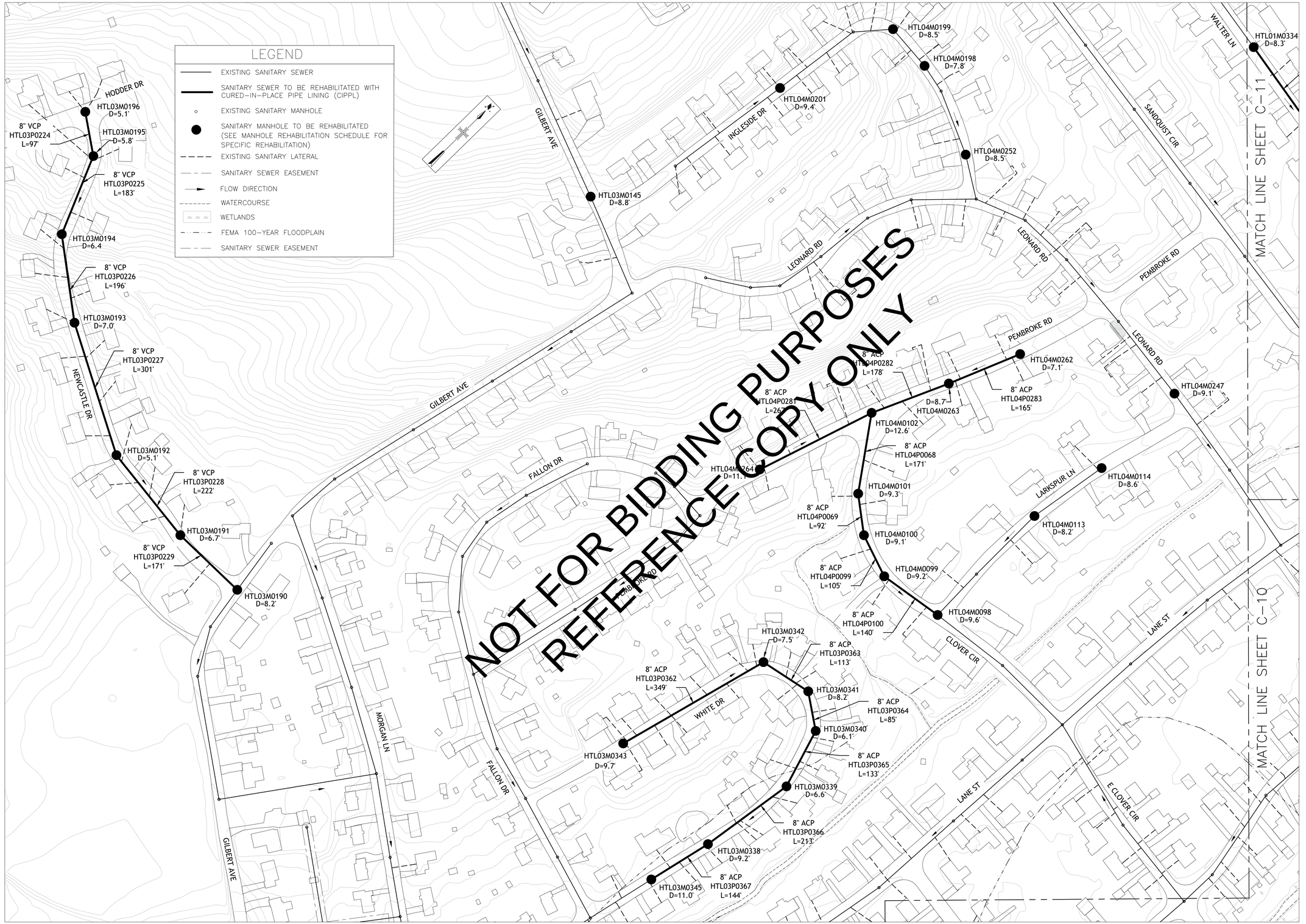

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SEALS

STATE OF CONNECTICUT
SCOTT R. HAYNES
No. 30870
LICENSED
PROFESSIONAL ENGINEER
8-5-2020

EAST HAVEN AND HAMDEN, CONNECTICUT

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SHEET TITLE

SEWER ASSET REHABILITATION
HAMDEN SHEET 2

SCALE: AS SHOWN

C-8

SHEET 12 OF 24

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REFERENCE COPY ONLY

MATCH LINE SHEET C-10

MATCH LINE SHEET C-7

HTL05M0049 D=9.5'
12" VCP HTL05P0044 L=185'
HTL05M0048 D=9.3'
12" VCP HTL05P0043 L=100'
12" VCP HTL05P0046 L=100'
CIRCULAR AVE
HTL05M0047 D=8.8'
12" VCP HTL05P0045 L=152'
D=9.4' HTL05M0034
D=9.5' HTL05M0046
PLAINS RD
HTL05M0043 D=10.0'
12" VCP HTL05P0039 L=202'
12" VCP HTL05P0047 L=239'
HTL05M0044 D=10.3'
BATTIS RD
ROSE ST
HTL05M028 D=7.6'
HDX02M0089 D=20.5'
12" VCP HDX02P0089 L=206'
CHESTER ST
HDX02M0078 D=10.9'
12" VCP HDX02P0088 L=292'
NOBLE ST
HDX02M0090 D=8.6'
12" VCP HDX02P0087 L=51'
D=8.7' HDX02M0091
12" VCP HDX02P0086 L=96'
HDX02M0092 D=8.6'
12" VCP HDX02P0085 L=172'
HDX02M0093 D=9.0'
NOBLE CT
12" VCP HDX02P0084 L=176'
HDX02M0094 D=9.8'
POND RD
CLAIRE TER
ARCADIA AVE
ARENTS RD
BEECHWOOD AVE
HTL05M0056 D=8.8'
BATTIS RD
HTL05M0040 D=9.2'
8" VCP HTL05P0034 L=177'
8" VCP HTL05P0033 L=175'
8" VCP HTL05P0032 L=162'
HTL05M0001 D=8.9'
HTL05M0042 D=9.1'
HTL05M0041 D=8.8'
8" VCP HTL05P0007 L=215'
HTL05M0002 D=13.3'
8" VCP HTL05P0006 L=223'
HTL05M0003 D=10.1'
8" VCP HTL05P0005 L=79'
HTL05M0004 D=9.3'
8" VCP HTL05P0004 L=202'
HTL05M0005 D=8.8'
8" VCP HTL05P0003 L=202'
HTL05M0006 D=11.9'
8" VCP HTL05P0002 L=175'
8" VCP HTL05P0001 L=191'
HTL05M0007 D=10.9'
HTL05M0008 D=8.9'
BATTIS RD
HDX02M0062 D=8.3'
MAPLEWOOD TER EXT
D=6.6' HDX02M0061
HDX02M0060 D=8.3'
8" ACP HDX02P0004 L=127'
8" ACP HDX02P0005 L=233'
GRANDVIEW AVE
BLUE HILLS AVE
D=8.4' HDX02M0376
D=10.8' HDX02M0377
D=8.3' HDX02M0378
D=9.3' HDX02M0385
BALDWIN RD
HIGHVIEW RD
WOODLAND AVE
GRANDVIEW AVE
WILBUR CROSS PKWY (ROUTE 15)
HTL05M0121 D=8.8'
ELEANOR ST
HIGHWOOD AVE
HTL05M0178 D=9.6'
8" ACP HTL05P0015 L=316'
HTL05M0022 D=6.5'
8" ACP HTL05P0014 L=285'
8" ACP HTL05P0023 L=226'
HTL05M0027 D=11.1'
8" ACP HTL05P0153 L=204'
8" ACP HTL05P0297 L=201'
HTL05M0138 D=10.4'
FEDERAL ST
8" ACP HTL05P0154 L=198'
HTL05M0023 D=8.5'
8" ACP HTL05P0298 L=229'
SPRINGDALE ST
HTL05M0302 D=7.1'
HTL05M0024 D=6.5'
8" ACP HTL05P0022 L=251'
PENN ST
HTL05M0025 D=7.7'
8" ACP HTL05P0021 L=252'
HARRISON DR
8" ACP HTL05P0020 L=251'
HTL05M0026 D=9.7'
8" ACP HTL05P0018 L=117'
HTL05M0020 D=6.0'
HTL05M0021 D=7.0'
8" ACP HTL05P0019 L=85'
VANTAGE RD

CONTRACTOR TO REMOVE HARDENED DEBRIS LOCATED APPROX. 5' FROM HTL05M0008 AS PART OF SANITARY SEWER CLEANING WORK.

LEGEND

- EXISTING SANITARY SEWER
- SANITARY SEWER TO BE REHABILITATED WITH CURED-IN-PLACE PIPE LINING (CIPPL)
- EXISTING SANITARY MANHOLE
- SANITARY MANHOLE TO BE REHABILITATED (SEE MANHOLE REHABILITATION SCHEDULE FOR SPECIFIC REHABILITATION)
- EXISTING SANITARY LATERAL
- SANITARY SEWER EASEMENT
- FLOW DIRECTION
- WATERCOURSE
- WETLANDS
- FEMA 100-YEAR FLOODPLAIN
- SANITARY SEWER EASEMENT

50 0 50 100
SCALE: 1" = 100'

ARCADIS

LEGAL ENTITY:
ARCADIS U.S., INC.

CONSULTANTS

SEALS

STATE OF CONNECTICUT
SCOTT R. HAINES
No. 30910
LICENSED PROFESSIONAL ENGINEER
8-5-2020

EAST HAVEN AND HAMDEN, CONNECTICUT

GNHWPCA

SEWER SYSTEM IMPROVEMENTS TO REDUCE INFILTRATION/INFLOW

CONTRACT NO.
CWF 2016-06

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SHEET TITLE

SEWER ASSET REHABILITATION
HAMDEN SHEET 3

SCALE: AS SHOWN

C-9

SHEET 13 OF 24

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LEGEND

- EXISTING SANITARY SEWER
- SANITARY SEWER TO BE REHABILITATED WITH CURED-IN-PLACE PIPE LINING (CIPPL)
- EXISTING SANITARY MANHOLE
- SANITARY MANHOLE TO BE REHABILITATED (SEE MANHOLE REHABILITATION SCHEDULE FOR SPECIFIC REHABILITATION)
- EXISTING SANITARY LATERAL
- SANITARY SEWER EASEMENT
- FLOW DIRECTION
- WATERCOURSE
- WETLANDS
- FEMA 100-YEAR FLOODPLAIN
- SANITARY SEWER EASEMENT

NOTES:

1. REFER TO SHEET C-15 FOR ADDITIONAL INFORMATION PERTAINING TO WORK IN THE PARADISE AVENUE EASEMENT ALONG DENSLOW HILL ROAD.

NOT FOR BIDDING PURPOSES
REFERENCE COPY ONLY

MATCH LINE SHEET C-11

MATCH LINE SHEET C-8

MATCH LINE SHEET C-7

MATCH LINE SHEET C-9

LANE ST

KATHERINE DR

FIELDCREST LN

HTL04M0353
D=8.1'

HTL04M0226
D=7.8'

HTL05M0222
D=6.3'

URSINI DR

D=5.3'
HTL04M034

18" RCP
HTL04P0090
L=285'

HTL04M0062
D=11.0'

18" RCP
HTL04P0089
L=46'

HTL04M0063
D=11.1'

18" RCP
HTL04P0088
L=231'

HTL04M0065
D=9.8'

BENHAM ST

18" RCP
HTL04P0086
L=134'

HTL04M0359
D=14.7'

HTL04M0358
D=13.6'

18" RCP
HTL04P0387
L=96'

HTL04M0357
D=11.4'

18" RCP
HTL04P0388
L=123'

18" RCP
HTL04P0087
L=295'

HTL04M0356
D=9.7'

HTL04M0355
D=9.4'

18" RCP
HTL04P0390
L=167'

DENSLOW HILL RD

LIMIT OF WORK UNDER ITEM 525.01, PARADISE AVENUE EASEMENT SEWER IMPROVEMENTS (INCLUDES REHABILITATION OF MANHOLE HTL04M0066)

HTL04M0066
D=11.1'

18" RCP
HTL04P0389
L=107'

CIRCULAR AVE

BENHAM ST

CHERRY HILL RD

HTL05M0018
D=8.5'

HTL05M0073
D=9.3'

HARRISON DR

HTL05M0303
D=7.8'

SPRINGDALE ST

FEDERAL ST

PENN ST

HTL04M0075
D=9.8'

12" VCP
HTL05P0042
L=214'

HTL05M0049
D=9.5

ELEANOR ST

HIGHWOOD AVE

8" ACP
HTL05P0153
L=204'

HTL05M0139
D=7.1'

8" ACP
HTL05P0297
L=201'

HTL05M0302
D=7.1'

HTL05M0020
D=6.0'

8" ACP

50 0 50 100
SCALE: 1" = 100'

ARCADIS

LEGAL ENTITY:
ARCADIS U.S., INC.

CONSULTANTS

SEALS

STATE OF CONNECTICUT
SCOTT R. HAYNES
No. 33831
LICENSED
PROFESSIONAL ENGINEER
8-5-2020

EAST HAVEN AND HAMDEN, CONNECTICUT

GNHWPCA

SEWER SYSTEM IMPROVEMENTS TO REDUCE INFILTRATION/INFLOW

CONTRACT NO.
CWF 2016-06

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SHEET TITLE

SEWER ASSET REHABILITATION
HAMDEN SHEET 4

SCALE: AS SHOWN

C-10

SHEET 14 OF 24

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MATCH LINE SHEET C-12

HTL01M0149 D=8.2'
HTL01M0297 D=7.2'
HTL01M0177 D=7.8'
HTL01M0083 D=8.2'
HTL01M0111 D=5.8'
SANDQUIST CIR
RICHARD DR
HTL01M0295 D=7.3'
HTL01M0176 D=8.6'
WILSON LN
HTL01M0337 D=11.1'
MEGIN DR
HEARN LN
SANDQUIST CIR
HTL01M0335 D=8.4'
HTL01M0107 D=6.8'
HTL01M0108 D=5.2'
HTL04M0199 D=8.5'
WALTER LN
HTL01M0173 D=10.4'
BRIGHT ST
HTL01M0334 D=8.3'
COOPER LN
8" ACP HTL01P0359 L=200'
HTL01M0333 D=7.5'
HTL01M0090 D=12.3'
8" ACP HTL01P0360 L=204'
HTL01M0171 D=7.6'
HTL01M0332 D=6.6'
HTL01M0092 D=12.1'
8" ACP HTL01P0361 L=197'
HTL01M0170 D=8.3'
SANDQUIST CIR
HTL01M0058 D=17.4'
HTL01M0169 D=8.3'
18" RCP HTL04P0092 L=126'
HTL01M0168 D=9.4'
HTL04M0059 D=20.6'
18" RCP HTL04P0397 L=202'
SANDQUIST CIR
HTL04M0367 D=20.4'
LANE ST
18" RCP HTL04P0091 L=214'
HTL04M0247 D=9.1'
HTL04M0366 D=15.1'
HTL04M0060 D=17.5'
18" RCP HTL04P0090 L=285'
LANE ST
MATCH LINE SHEET C-8
MATCH LINE SHEET C-10

50 0 50 100
SCALE: 1" = 100'

LEGEND

- EXISTING SANITARY SEWER
- SANITARY SEWER TO BE REHABILITATED WITH CURED-IN-PLACE PIPE LINING (CIPPL)
- EXISTING SANITARY MANHOLE
- SANITARY MANHOLE TO BE REHABILITATED (SEE MANHOLE REHABILITATION SCHEDULE FOR SPECIFIC REHABILITATION)
- EXISTING SANITARY LATERAL
- SANITARY SEWER EASEMENT
- FLOW DIRECTION
- WATERCOURSE
- WETLANDS
- FEMA 100-YEAR FLOODPLAIN
- SANITARY SEWER EASEMENT

ARCADIS

LEGAL ENTITY:
ARCADIS U.S., INC.

CONSULTANTS

SEALS

STATE OF CONNECTICUT
SCOTT R. HAYNES
No. 30931
LICENSED
PROFESSIONAL ENGINEER
8-5-2020

EAST HAVEN AND HAMDEN, CONNECTICUT

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SEWER SYSTEM IMPROVEMENTS TO REDUCE INFILTRATION/INFLOW

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SHEET TITLE

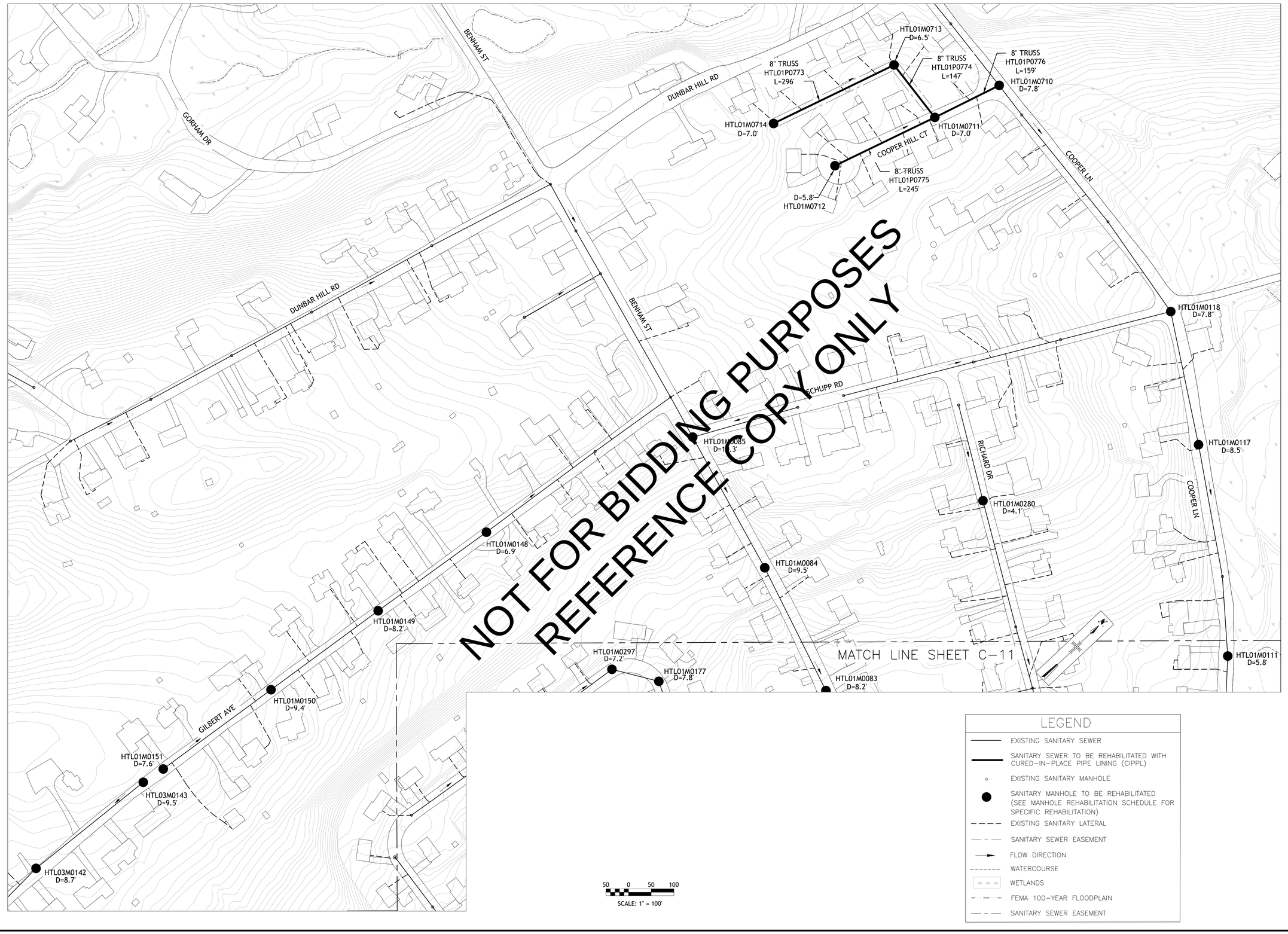
SEWER ASSET REHABILITATION
HAMDEN SHEET 5

SCALE:
AS SHOWN

C-11

SHEET 15 OF 24

User: SMITCHELL Spec: AUS-NCSMOD File: G:\CADD\ACAD\PROJ\05654065.0000 - EH&H SEWER REHAB\BID SET\BID SET DESIGN PLANS - CWF2016-06.DWG Scale:1:1 SavedDate: 7/24/2020 Time: 10:34 Plot Date: Mitchell, Sean; 7/24/2020; 11:55 ; Layout: C-11



LEGEND

- EXISTING SANITARY SEWER
- SANITARY SEWER TO BE REHABILITATED WITH CURED-IN-PLACE PIPE LINING (CIPPL)
- EXISTING SANITARY MANHOLE
- SANITARY MANHOLE TO BE REHABILITATED (SEE MANHOLE REHABILITATION SCHEDULE FOR SPECIFIC REHABILITATION)
- EXISTING SANITARY LATERAL
- SANITARY SEWER EASEMENT
- FLOW DIRECTION
- WATERCOURSE
- WETLANDS
- FEMA 100-YEAR FLOODPLAIN
- SANITARY SEWER EASEMENT

ARCADIS

LEGAL ENTITY:
ARCADIS U.S., INC.

CONSULTANTS

SEALS

STATE OF CONNECTICUT
SCOTT R. HAYDEN
No. 32630
LICENSED PROFESSIONAL ENGINEER
8-5-2020

EAST HAVEN AND HAMDEN, CONNECTICUT

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DESIGNED BY: SPM
DRAWN BY: SPM
CHECKED BY: SRH

SHEET TITLE

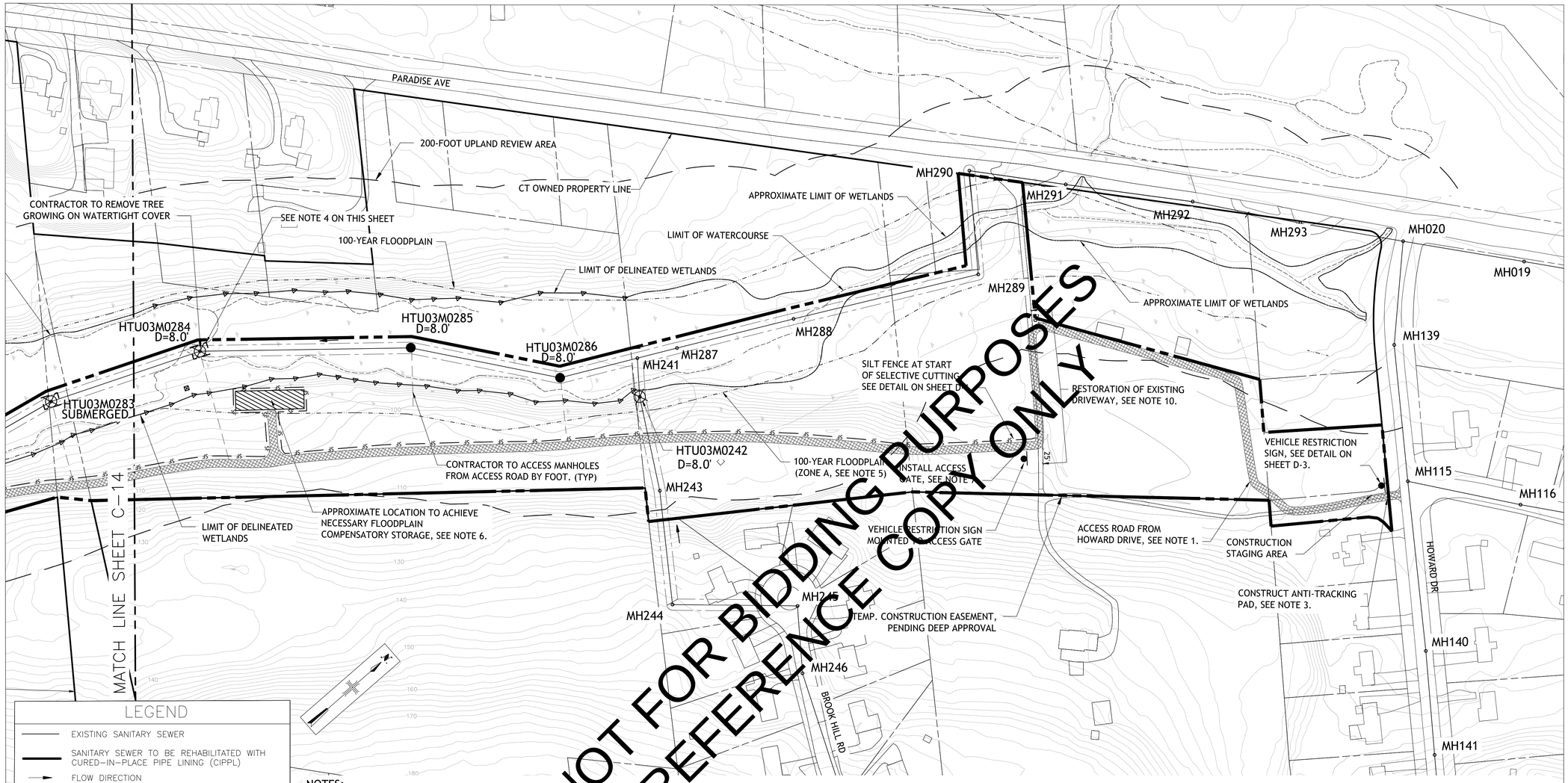
SEWER ASSET REHABILITATION
HAMDEN SHEET 6

SCALE: AS SHOWN

C-12

SHEET 16 OF 24

User:SMITCHELL Spec:AUS-NCSMOD File:G:\CADD\ACAD\PROJ\05654065.0000 - EHHW SEWER REHAB\BID SET\BID SET DESIGN PLANS - CWF2016-06.DWG Scale:1:1 SavedDate:7/24/2020 Time:10:34 Plot Date: Mitchell, Sean; 7/24/2020; 11:55 ; Layout:C-12



LEGEND

- EXISTING SANITARY SEWER
- SANITARY SEWER TO BE REHABILITATED WITH CURED-IN-PLACE PIPE LINING (CIPPL)
- FLOW DIRECTION
- EXISTING SANITARY MANHOLE
- SANITARY MANHOLE TO BE REHABILITATED
- SANITARY MANHOLE TO BE RAISED AND REHABILITATED
- EXISTING SANITARY SEWER EASEMENT
- TEMPORARY CONSTRUCTION EASEMENT
- PARCEL LINE
- WATERCOURSE
- STATE AND FEDERAL DELINEATED WETLANDS FLAG
- STATE DELINEATED WETLANDS FLAG
- FEDERAL DELINEATED WETLANDS FLAG
- INLAND WETLANDS (CTDEEP GIS DATABASE)
- 100-YEAR FLOODPLAIN
- 200-FOOT UPLAND REVIEW AREA
- PERMANENT ACCESS TO MANHOLE
- TEMPORARY COFFERDAM
- SF — SILT FENCE
- ACCESS ROAD
- BYPASS — PROPOSED BYPASS PIPING

NOTES:

1. ACCESS ROAD IS SHOWN SCHEMATICALLY. EXACT ROUTE TO BE DETERMINED IN THE FIELD TO MINIMIZE DISTURBANCE TO THE EXISTING AREAS. CONTRACTOR SHALL REMOVE TREES AND BRUSH AND SELECTIVELY CUT AND REMOVE STUMPS AND ROCKS AS NECESSARY TO CONSTRUCT ACCESS ROAD (14 FOOT MIN WIDTH). REFER TO ACCESS ROAD DETAIL ON SHEET D-4. ACCESS ROAD AND ANY ASSOCIATED GROUND IMPROVEMENTS FROM HOWARD AVE TO THE PROPOSED LOCATION OF THE ACCESS GATE SHALL MATCH EXISTING GRADE; ANY MATERIAL REMOVED FOR CONSTRUCTION OF THE ACCESS ROAD SHALL BE DISPOSED OF OFFSITE. REFER TO ACCESS ROAD CUT AND FILL DETAIL ON SHEET D-4 FOR ADDITIONAL INFORMATION PERTAINING TO THE ACCESS ROAD SOUTH OF THE PROPOSED ACCESS GATE.
2. CONTRACTOR SHALL COORDINATE AND CONDUCT A SITE WALK WITH CTDEEP FORESTER TO DETERMINE TREES TO BE SALVAGED FOR DEEP'S USE. CONTRACTOR SHALL STOCKPILE SALVAGED TREES IN A LOCATION DETERMINED BY DEEP AND APPROVED BY THE ENGINEER.
3. CONTRACTOR SHALL CONSTRUCT APPROXIMATELY 200-FOOT LONG ANTI-TRACKING PAD ALONG THE EXISTING DRIVEWAY IN ACCORDANCE WITH CT FORM 817 AND CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROLS. ANTI-TRACKING PAD AND ANY ASSOCIATED GROUND IMPROVEMENTS SHALL MATCH EXISTING GRADE; ANY MATERIAL REMOVED FOR CONSTRUCTION OF THE ANTI-TRACKING PAD SHALL BE DISPOSED OF OFFSITE.
4. CONTRACTOR SHALL CONSTRUCT TEMPORARY COFFERDAMS AROUND MANHOLES, DEWATER, REPLACE AND RAISE MANHOLE FRAMES AND COVERS, AND REHABILITATE INTERIOR OF MANHOLES AS INDICATED IN THE SPECIFICATIONS. SEE TEMPORARY COFFERDAM DETAIL ON SHEET D-4. WATER ELEVATIONS WITHIN THE IMPOUNDMENT ARE SUBJECT TO CHANGE WITHOUT NOTICE. CONTRACTOR SHALL DESIGN COFFERDAMS AND SCHEDULE WORK ACCORDINGLY.
5. THE 100-YEAR FLOODPLAIN LINE SHOWN IS FROM THE CTDEEP GIS DATA WEBSITE. THE BASE FLOOD ELEVATION (BFE) IN ZONE A IS NOT DETERMINED (FEMA MAP NO. 09009c0431J; REVISED MAY 16, 2017)
6. CONTRACTOR TO PROVIDE FLOODPLAIN COMPENSATORY STORAGE BETWEEN THE 100-YEAR FLOODPLAIN AND THE FLAGGED STATE AND FEDERAL DELINEATED WETLANDS. 6-INCHES OF TOPSOIL SHALL BE STRIPPED AND STOCKPILED FOR RE-USE. EXCAVATE APPROXIMATELY 150 CUBIC YARDS OF MATERIAL. IF SUITABLE AND FREE OF INVASIVE SPECIES, MATERIAL TO BE USED IN CONSTRUCTING PERMANENT ACCESS TO MANHOLE HTU03M0282. FOR RESTORATION OF COMPENSATORY STORAGE AREA, CONTRACTOR SHALL PLACE EXISTING ORGANIC MATERIAL EXCAVATED FROM MH282 PENINSULA SUB-BASE, REPLACE TOPSOIL AND RESTORE SURFACE WITH APPROVED WETLANDS SEED MIX AND PLANTINGS. WORK SHALL BE COMPLETED SUCH THAT FINISHED COMPENSATORY STORAGE AREA MEETS WITH EXISTING ELEVATIONS AT BOUNDARIES OF EXCAVATION.
7. CONTRACTOR SHALL PROVIDE AND INSTALL ACCESS GATE ACROSS ACCESS ROAD IN ACCORDANCE WITH ACCESS GATE DETAILS ON SHEET D-5. LOCATION OF ACCESS GATE TO BE DETERMINED BY CT DEEP AND APPROVED BY ENGINEER. CONTRACTOR SHALL PROVIDE A CHAIN TO ALLOW FOR LOCKING/ACCESS WITH MULTIPLE PADLOCKS.
8. ACCESS ROAD FROM HOWARD AVE TO APPROXIMATE LOCATION OF ACCESS GATE IS LOCATED ON AN ACTIVE FARM. CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES WITH THE FARMER TO MINIMIZE DISTURBANCE TO FARMING ACTIVITIES.
9. CONTRACTOR SHALL SEED ALL DISTURBED AREAS AND MAINTAIN SITE RESTORATION UNTIL PLANT GROWTH IS ESTABLISHED.
10. UPON COMPLETION OF THE PARADISE AVENUE EASEMENT SEWER IMPROVEMENTS, CONTRACTOR SHALL RESTORE THE PORTION OF THE EXITING DRIVEWAY AS DELINEATED ON THIS SHEET BY PLACING 1.5" THICK BASE COURSE BITUMINOUS CONCRETE CLASS 1 ON THE STONE ACCESS ROAD AND 1.5" THICK OVERLAY BITUMINOUS CONCRETE CLASS 2 FOR THE LENGTH OF THE BASE COURSE PLUS 25 FEET TO THE EAST AND WEST, AS INDICATED.

0 100' 200'

ARCADIS

LEGAL ENTITY:
ARCADIS U.S., INC.

CONSULTANTS

SEALS

STATE OF CONNECTICUT · SCOTT R. HAYNES · No. 30931 · LICENSED PROFESSIONAL ENGINEER
8-5-2020

EAST HAVEN AND HAMDEN, CONNECTICUT

GNHWPCA

SEWER SYSTEM IMPROVEMENTS TO REDUCE INFILTRATION/INFLOW

CONTRACT NO.
CWF 2016-06

NO.	DATE	ISSUED FOR	BY

COPYRIGHT: ARCADIS U.S., INC.

DATE:	AUGUST 2020
PROJECT NO.:	05654065.0000
FILE NAME:	BID SET
DESIGNED BY:	SPM
DRAWN BY:	SPM
CHECKED BY:	SRH

SHEET TITLE

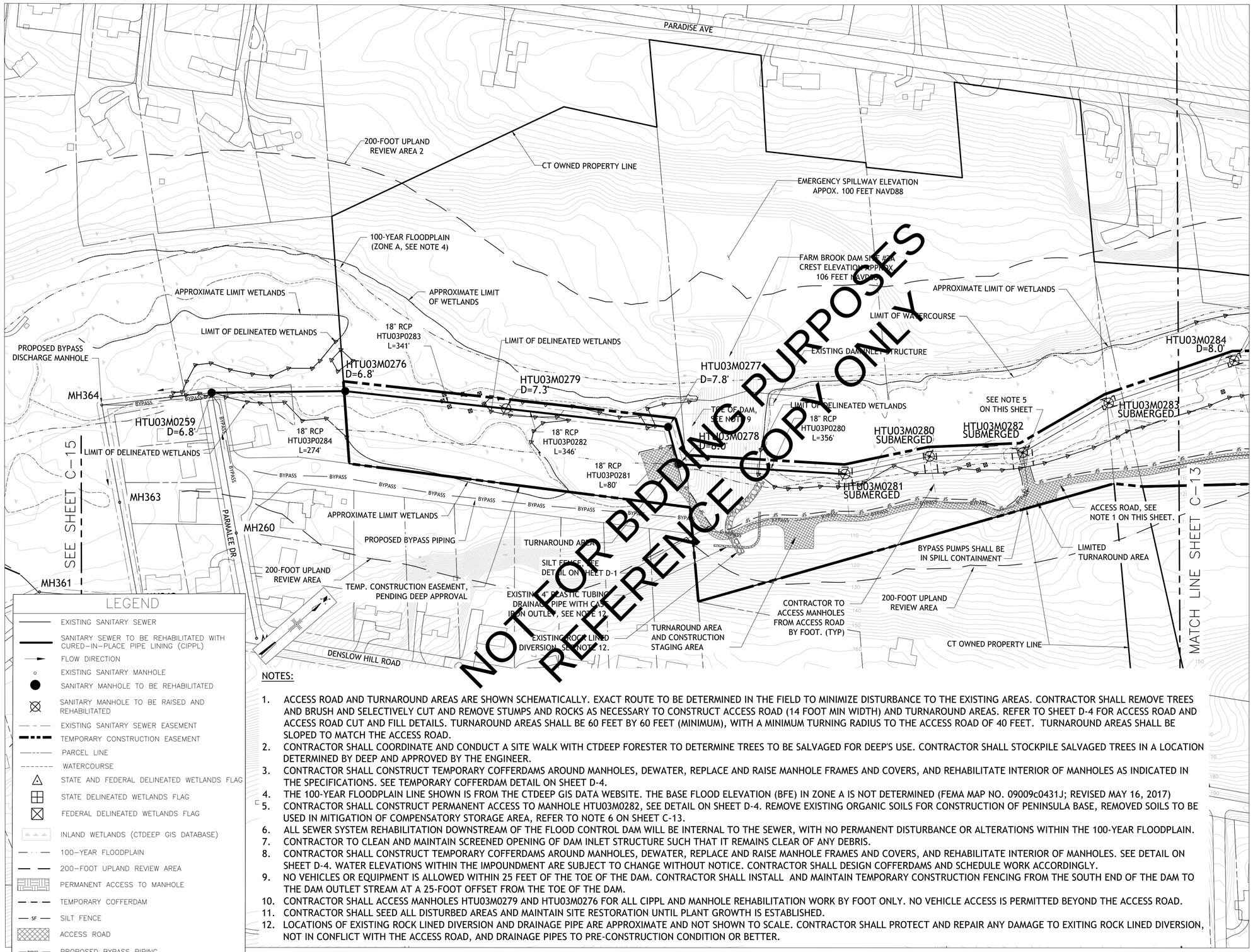
PARADISE AVENUE EASEMENT SEWER IMPROVEMENTS SHEET 1

SCALE: AS SHOWN

C-13

SHEET 17 OF 24

User:SMITCHELL Spec:AUS-NCSMOD File:G:\CAD\LACAD\PROJ\05654065.0000 - EH&H SEWER REHAB\BID SET\BID SET CWF2016-06 C-12, C-13, D-4 (PAE).DWG Scale:1:1 SavedDate:7/29/2020 Time:16:16 Plot Date: Mitchell, Sean; 7/29/2020, 16:22 ; Layout:C-13



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REFERENCE COPY ONLY

NOTES:

1. ACCESS ROAD AND TURNAROUND AREAS ARE SHOWN SCHEMATICALLY. EXACT ROUTE TO BE DETERMINED IN THE FIELD TO MINIMIZE DISTURBANCE TO THE EXISTING AREAS. CONTRACTOR SHALL REMOVE TREES AND BRUSH AND SELECTIVELY CUT AND REMOVE STUMPS AND ROCKS AS NECESSARY TO CONSTRUCT ACCESS ROAD (14 FOOT MIN WIDTH) AND TURNAROUND AREAS. REFER TO SHEET D-4 FOR ACCESS ROAD AND ACCESS ROAD CUT AND FILL DETAILS. TURNAROUND AREAS SHALL BE 60 FEET BY 60 FEET (MINIMUM), WITH A MINIMUM TURNING RADIUS TO THE ACCESS ROAD OF 40 FEET. TURNAROUND AREAS SHALL BE SLOPED TO MATCH THE ACCESS ROAD.
2. CONTRACTOR SHALL COORDINATE AND CONDUCT A SITE WALK WITH CTDEEP FORESTER TO DETERMINE TREES TO BE SALVAGED FOR DEEP'S USE. CONTRACTOR SHALL STOCKPILE SALVAGED TREES IN A LOCATION DETERMINED BY DEEP AND APPROVED BY THE ENGINEER.
3. CONTRACTOR SHALL CONSTRUCT TEMPORARY COFFERDAMS AROUND MANHOLES, DEWATER, REPLACE AND RAISE MANHOLE FRAMES AND COVERS, AND REHABILITATE INTERIOR OF MANHOLES AS INDICATED IN THE SPECIFICATIONS. SEE TEMPORARY COFFERDAM DETAIL ON SHEET D-4.
4. THE 100-YEAR FLOODPLAIN LINE SHOWN IS FROM THE CTDEEP GIS DATA WEBSITE. THE BASE FLOOD ELEVATION (BFE) IN ZONE A IS NOT DETERMINED (FEMA MAP NO. 09009c0431J; REVISED MAY 16, 2017)
5. CONTRACTOR SHALL CONSTRUCT PERMANENT ACCESS TO MANHOLE HTU03M0282, SEE DETAIL ON SHEET D-4. REMOVE EXISTING ORGANIC SOILS FOR CONSTRUCTION OF PENINSULA BASE, REMOVED SOILS TO BE USED IN MITIGATION OF COMPENSATORY STORAGE AREA, REFER TO NOTE 6 ON SHEET C-13.
6. ALL SEWER SYSTEM REHABILITATION DOWNSTREAM OF THE FLOOD CONTROL DAM WILL BE INTERNAL TO THE SEWER, WITH NO PERMANENT DISTURBANCE OR ALTERATIONS WITHIN THE 100-YEAR FLOODPLAIN.
7. CONTRACTOR TO CLEAN AND MAINTAIN SCREENED OPENING OF DAM INLET STRUCTURE SUCH THAT IT REMAINS CLEAR OF ANY DEBRIS.
8. CONTRACTOR SHALL CONSTRUCT TEMPORARY COFFERDAMS AROUND MANHOLES, DEWATER, REPLACE AND RAISE MANHOLE FRAMES AND COVERS, AND REHABILITATE INTERIOR OF MANHOLES. SEE DETAIL ON SHEET D-4. WATER ELEVATIONS WITHIN THE IMPOUNDMENT ARE SUBJECT TO CHANGE WITHOUT NOTICE. CONTRACTOR SHALL DESIGN COFFERDAMS AND SCHEDULE WORK ACCORDINGLY.
9. NO VEHICLES OR EQUIPMENT IS ALLOWED WITHIN 25 FEET OF THE TOE OF THE DAM. CONTRACTOR SHALL INSTALL AND MAINTAIN TEMPORARY CONSTRUCTION FENCING FROM THE SOUTH END OF THE DAM TO THE DAM OUTLET STREAM AT A 25-FOOT OFFSET FROM THE TOE OF THE DAM.
10. CONTRACTOR SHALL ACCESS MANHOLES HTU03M0279 AND HTU03M0276 FOR ALL CIPPL AND MANHOLE REHABILITATION WORK BY FOOT ONLY. NO VEHICLE ACCESS IS PERMITTED BEYOND THE ACCESS ROAD.
11. CONTRACTOR SHALL SEED ALL DISTURBED AREAS AND MAINTAIN SITE RESTORATION UNTIL PLANT GROWTH IS ESTABLISHED.
12. LOCATIONS OF EXISTING ROCK LINED DIVERSION AND DRAINAGE PIPE ARE APPROXIMATE AND NOT SHOWN TO SCALE. CONTRACTOR SHALL PROTECT AND REPAIR ANY DAMAGE TO EXITING ROCK LINED DIVERSION, NOT IN CONFLICT WITH THE ACCESS ROAD, AND DRAINAGE PIPES TO PRE-CONSTRUCTION CONDITION OR BETTER.

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LEGAL ENTITY:
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CONSULTANTS

SEALS

STATE OF CONNECTICUT · SCOTT R. HAYDEN · No. 32631 · LICENSED PROFESSIONAL ENGINEER
8-5-2020

EAST HAVEN AND HAMDEN, CONNECTICUT

GNHWPCA

SEWER SYSTEM IMPROVEMENTS TO REDUCE INFILTRATION/INFLOW

CONTRACT NO.
CWF 2016-06

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DATE:	AUGUST 2020
PROJECT NO.:	05654065.0000
FILE NAME:	BID SET
DESIGNED BY:	SPM
DRAWN BY:	SPM
CHECKED BY:	SRH

SHEET TITLE

PARADISE AVENUE EASEMENT SEWER IMPROVEMENTS SHEET 2

SCALE: AS SHOWN

C-14

SHEET 18 OF 24

User:SMITCHELL Spec:AUS-NCSMOD File:G:\CAD\ACAD\PROJ\05654065.0000 - EH&H SEWER REHAB\BID SET\BID SET CWF2016-06 C-12, C-13, D-4 (PAE).DWG Scale:1:1 SavedDate:7/29/2020 Time:16:16 Plot Date: Mitchell, Sean; 7/29/2020, 16:23 ; Layout:C-14

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REFERENCE COPY ONLY

HTL04M0058
HTL04M0061
HTL04M0063
D=11.1'
18" RCP
HTL04P0088
L=231'
HTL04M0064
HTL04M0065
D=9.8'
100-YEAR FLOODPLAIN
18" RCP
HTL04P0087
L=295'
HTL04M0066
D=11.1'
HTL04M0067
18" RCP
HTL04P0390
L=167'
HTL04M0355
D=9.4'
18" RCP
HTL04P0389
L=107'
LIMIT OF WORK UNDER ITEM 525.01,
PARADISE AVENUE EASEMENT SEWER
IMPROVEMENTS (INCLUDES REHABILITATION
OF MANHOLE HTL04M0066)
LIMIT OF WATERCOURSE
LIMIT OF STATE AND
FEDERAL DELINEATED
WETLANDS
18" RCP
HTL04P0386
L=134'
HTL04M0359
18" RCP
HTL04P0387
L=96'
HTL04M0358
D=11.6'
18" RCP
HTL04P0388
L=123'
HTL04M0357
D=11.4'
HTL04M0356
D=9.7'
200-FOOT UPLAND REVIEW AREA
SANITARY SEWER
EASEMENT
HTL04M0360
HTL04M0361
HTL04M0362
HTU04M0363
SEE SHEET C-14
BYPASS
NO HEAVY EQUIPMENT OR MATERIAL STORAGE
PERMITTED DURING WORK TO BE PERFORMED
ON OR AROUND MH HTL04M0359; FOOT
TRAFFIC ONLY. SOIL REMOVAL REQUIRED IN
THE IMMEDIATE VICINITY OF MH HTL04M0359
TO BE REMOVED AND REPLACED BY HAND.
BYPASS TO BE RUN IN PAVED ROADWAY
200-FOOT UPLAND REVIEW AREA

NOTES:

1. REFER TO SHEET C-10 FOR ADDITIONAL INFORMATION PERTAINING TO WORK IN THE PARADISE AVENUE EASEMENT ALONG DENSLOW HILL ROAD.

LEGEND

- EXISTING SANITARY SEWER
- SANITARY SEWER TO BE REHABILITATED WITH CURED-IN-PLACE PIPE LINING (CIPPL)
- FLOW DIRECTION
- EXISTING SANITARY MANHOLE
- SANITARY MANHOLE TO BE REHABILITATED
- SANITARY MANHOLE TO BE RAISED AND REHABILITATED
- SANITARY SEWER EASEMENT
- PARCEL LINE
- WATERCOURSE
- STATE AND FEDERAL DELINEATED WETLANDS FLAG
- STATE DELINEATED WETLANDS FLAG
- FEDERAL DELINEATED WETLANDS FLAG
- INLAND WETLANDS (CTDEEP GIS DATABASE)
- 100-YEAR FLOODPLAIN
- 200-FOOT UPLAND REVIEW AREA
- PERMANENT ACCESS TO MANHOLE
- TEMPORARY COFFERDAM
- SF SILT FENCE
- CONTRACTOR ACCESS ROUTE
- BYPASS PROPOSED BYPASS PIPING

0 20' 40' 80'

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LEGAL ENTITY:
ARCADIS U.S., INC.

CONSULTANTS

SEALS

STATE OF CONNECTICUT
SCOTT R. HAYNES
No. 30870
LICENSED
PROFESSIONAL ENGINEER
8-5-2020

EAST HAVEN AND HAMDEN, CONNECTICUT

GNHWPCA

SEWER SYSTEM IMPROVEMENTS TO REDUCE INFILTRATION/INFLOW

CONTRACT NO.
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FILE NAME: BID SET
DESIGNED BY: SPM
DRAWN BY: SPM
CHECKED BY: SRH

SHEET TITLE

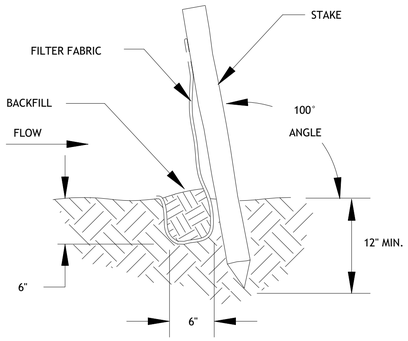
PARADISE AVENUE EASEMENT SEWER IMPROVEMENTS SHEET 3

SCALE: AS SHOWN

C-15

SHEET 19 OF 24

User:SMITCHELL Spec:AUS-NCSM0D File:G:\CAD\LACAD\PROJ\05654065.0000 - EH&H SEWER REHAB\BID SET\BID SET DESIGN SUBMITTAL SHEET C-15 (DENSLOW).DWG Scale:1:1 SavedDate:7/24/2020 Time:12:07 Plot Date: Mitchell, Sean: 7/24/2020, 12:07 , Layout:C-15

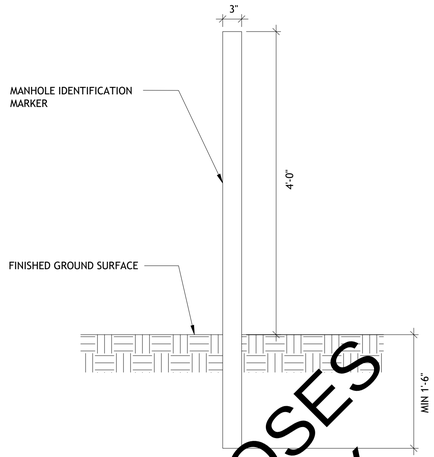


SILT FENCE INSTALLATION DETAIL

NOT TO SCALE

STANDARD PROCEDURES FOR THE INSTALLATION OF SILT FENCE:

1. THE SILT FENCE SHALL BE PLACED AS NECESSARY AT LOCATIONS AS DIRECTED BY THE ENGINEER OR BY TOWN AGENCIES HAVING JURISDICTION TO CONTROL THE MOVEMENT OF SEDIMENT. ALL SILT FENCE SHALL BE PLACED WITHIN THE EASEMENT.
2. AT THE TIME OF INSTALLATION, THE SILT FENCE SHALL BE REJECTED IF IT HAS DEFECTS, RIPS, HOLES, FLAWS, DETERIORATION OR DAMAGE INCURRED DURING MANUFACTURE, TRANSPORTATION, OR STORAGE.
3. SILT FENCE SHALL BE INSTALLED FAR ENOUGH UP THE SLOPE SO THAT THE BOTTOM OF THE FENCE END IS HIGHER THAN THE TOP OF THE LOWEST PORTION OF THE FENCE.
4. MINIMUM LENGTH OF SILT FENCE IS 15 LF.
5. MAXIMUM POST SPACING IS 10 LF.
6. JOINTS ONLY AT SUPPORT POST WITH MINIMUM 6" OVERLAP AND SECURELY SEALED.
7. SEDIMENTATION DEPOSITS SHALL BE REMOVED WHEN IT REACHES ONE HALF THE HEIGHT OF THE SILT FENCE.
8. SILT FENCE SHALL NOT BE USED IN A WATER COURSE.
9. UPON ESTABLISHMENT OF GROUND COVER ON DISTURBED AREAS AND WHEN DIRECTED BY THE ENGINEER, FENCE WILL BE REMOVED AND ANY SEDIMENTATION WILL BE THINLY SPREAD UPON EXISTING GROUND OVER.
10. SILT FENCE SHALL BE INSPECTED BY CONTRACTOR WEEKLY AND FOLLOWING EACH STORM EVENT.
11. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARDS FOR EROSION AND SEDIMENT CONTROL IN CONNECTICUT AND THE "CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL", MAY 2002 (AND ALL AMENDMENTS) BY THE CONNECTICUT COUNCIL ON SOIL AND WATER CONSERVATION IN COOPERATION WITH THE CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION.



MANHOLE IDENTIFICATION MARKER INSTALLATION DETAIL

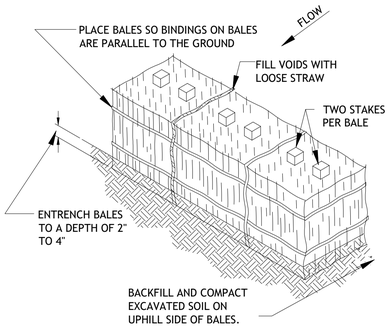
NOT TO SCALE

SCHEDULE OF MANHOLE IDENTIFICATION MARKERS

SHEET NO.	MANHOLE ID
C-2	EMG01M0263
C-7	HTL03M0233
C-7	HTL03M0233
C-10	HTL04M0359
C-10	HTL04M0358
C-10	HTL04M0357
C-10	HTL04M0356
C-10	HTL04M0355

NOTE:

CONTRACTOR SHALL INSTALL STEEL POST MANHOLE IDENTIFICATION MARKERS PROVIDED BY THE OWNER. SEE SCHEDULE OF MANHOLE IDENTIFICATION MARKERS THIS SHEET.



HAY BALE INSTALLATION DETAIL

NOT TO SCALE

STANDARD PROCEDURES FOR THE INSTALLATION OF HAY BALES:

1. THE HAY BALES SHALL BE PLACED AS NECESSARY IN WORK AREAS SHOWN ON SHEETS C-1 THROUGH C-15 AND AT LOCATIONS AS DIRECTED BY THE ENGINEER OR BY TOWN AGENCIES HAVING JURISDICTION TO CONTROL THE MOVEMENT OF SEDIMENT. ALL HAY BALES SHALL BE PLACED WITHIN THE EASEMENT.
2. BALES SHOULD BE ENTRENCHED 2 TO 4 INCHES AND TIGHTLY BUTTED TOGETHER. BALES CAN BE SUCCESSFULLY PLACED WITHOUT A TRENCH IF GOOD GROUND CONTACT IS MADE. REMOVE HEAVY BRUSH AND FILL ALL VOIDS WITH LOOSE STRAW.
3. HAY BALES SHALL BE INSTALLED FAR ENOUGH UP THE SLOPE SO THAT THE BOTTOM OF THE HAY BALES' END IS HIGHER THAN THE TOP OF THE LOWEST PORTION OF THE HAY BALES.
4. WHEN SEDIMENTATION DEPOSITS REACH WITHIN 3" OF THE TOP OF BALES, REMOVE SEDIMENTATION OR ADD ADDITIONAL BALES DIRECTLY BEHIND FIRST ROW OF BALES AS DIRECTED BY ENGINEER.
5. UPON ESTABLISHMENT OF GROUND COVER ON DISTURBED AREAS AND WHEN DIRECTED BY THE ENGINEER, HAY BALES WILL BE REMOVED AND USED AS MULCH. ANY SEDIMENTATION WILL BE THINLY SPREAD UPON ESTABLISHED GROUND COVER.
6. HAY BALES SHALL BE INSPECTED BY CONTRACTOR WEEKLY AND FOLLOWING EACH STORM EVENT.
7. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARDS FOR EROSION AND SEDIMENT CONTROL IN CONNECTICUT AND THE "CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL", MAY 2002 (AND ALL AMENDMENTS) BY THE CONNECTICUT COUNCIL ON SOIL AND WATER CONSERVATION IN COOPERATION WITH THE CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION.

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CONSULTANTS

SEALS

STATE OF CONNECTICUT
SCOTT R. HAYNES
No. 30930
LICENSED PROFESSIONAL ENGINEER
8-5-2020

EAST HAVEN AND HAMDEN, CONNECTICUT

GNHWPCA

SEWER SYSTEM IMPROVEMENTS TO REDUCE INFILTRATION/INFLOW

CONTRACT NO.
CWF 2016-06

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DATE: AUGUST 2020
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FILE NAME: BID SET
DESIGNED BY: SPM
DRAWN BY: SPM
CHECKED BY: SRH

SHEET TITLE

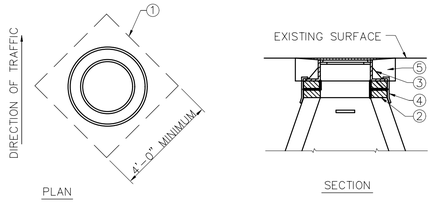
DETAILS SHEET 1

SCALE: NOT TO SCALE

D-1

SHEET 20 OF 24

User:SMITCHELL Spec:AUS-NCSM00 File:G:\CADD\ACAD\PROJ\05654065.0000 - EH&H SEWER REHAB\BID SET\BID SET DESIGN PLANS - CWF2016-06.DWG Scale:1:1 SavedDate:7/24/2020 Time:10:34 Plot Date: Mitchell, Sean; 7/24/2020; 11:56 ; Layout:D-1

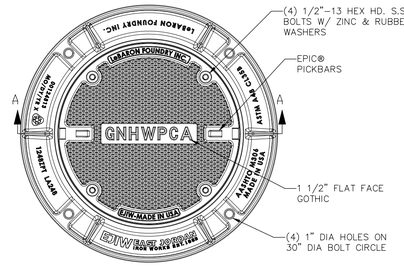


PLAN SECTION

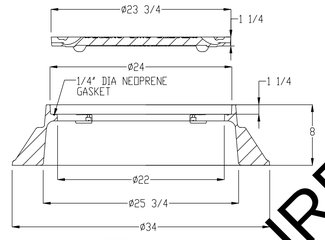
TYPICAL MANHOLE FRAME RAISING, RESETTING, AND REPLACING
NOT TO SCALE

NOTES:

1. CUT AND REMOVE EXISTING PAVEMENT TO NEAT LINES AS SHOWN OR AS DIRECTED. REMOVE BITUMINOUS CONCRETE FROM MANHOLE FRAME AND COVERS. CIRCULAR PAVEMENT CUT AROUND MANHOLE COVER ALSO ACCEPTABLE.
2. REMOVE AND REPLACE EXISTING MORTAR AND MASONRY WHICH IS LOOSE, DETERIORATED OR UNSOUND AS DIRECTED BY THE ENGINEER.
3. SET MANHOLE FRAME TO REQUIRED GRADE WITH MANHOLE GRADE RINGS OR AS DIRECTED BY THE GNHWPCA. MANHOLE FRAMES ARE TO BE SET IN FULL MORTAR BEDS.
4. INSTALL EXTERNAL CHIMNEY SEAL IN ACCORDANCE WITH CONTRACT SPECIFICATIONS.
5. REPLACE PAVEMENT IN ACCORDANCE WITH DETAILS ON SHEET D-3.
6. CONTRACTOR TO FURNISH NEW MANHOLE FRAME AND COVER AS REQUIRED.
7. EXISTING MANHOLE FRAME AND COVER TO BE DISPOSED OF AS DIRECTED BY THE ENGINEER.



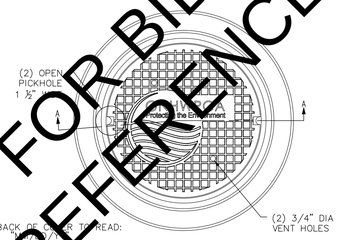
PLAN



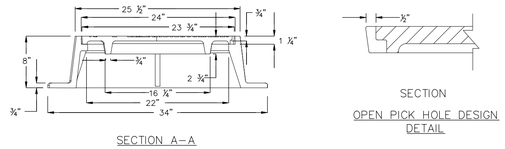
SECTION A – A

STANDARD WATERTIGHT MANHOLE FRAME AND COVER
NOT TO SCALE

NOTES:
1. AASHTO HS 20 LOAD RATED DESIGN. ASTM A48 CLASS 35B GRAY CAST IRON.
2. EJ GROUP MODEL 1246 OR APPROVED EQUAL.
3. MADE IN USA.



PLAN

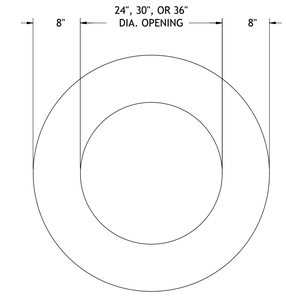


SECTION A–A SECTION

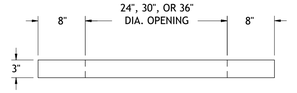
OPEN PICK HOLE DESIGN DETAIL

TYPICAL SANITARY SEWER MANHOLE FRAME AND COVER
NOT TO SCALE

NOTE:
1. GNHWPCA LOGO DESIGN WITH 1" SQUARE FACE PATTERN 1/8" HIGH.
2. AASHTO HS 20 LOAD RATED.
3. ASTM A48 CLASS 35B GRAY CAST IRON WITH NO ASPHALT COATING.
4. PICK HOLES SHALL BE SIZED SUFFICIENTLY FOR EASY REMOVAL OF THE COVER AND CONFORM TO "OPEN PICK HOLE DESIGN"
5. EJ MODEL 1246C OR APPROVED EQUAL



GRADE RING PLAN VIEW



GRADE RING ELEVATION VIEW

MANHOLE GRADE RING
NOT TO SCALE

NOTES:

1. REINFORCING STEEL WELDED WIRE FABRIC CONFORMS TO LATEST ASTM SPECIFICATION A185.
2. REINFORCING STEEL DEFORMED BARS CONFORM TO LATEST ASTM SPECIFICATION A615.
3. CONCRETE COMPRESSIVE STRENGTH - 4,000 PSI AT 28 DAYS.
4. MANHOLE DESIGN SPECIFICATION CONFORMS TO LATEST ASTM DESIGNATION C478.

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REFERENCE COPY ONLY

ARCADIS

LEGAL ENTITY:
ARCADIS U.S., INC.

CONSULTANTS

SEALS

STATE OF CONNECTICUT
SCOTT R. HAYNES
No. 30971
LICENSED PROFESSIONAL ENGINEER
8-5-2020

EAST HAVEN AND HAMDEN, CONNECTICUT

GNHWPCA

SEWER SYSTEM IMPROVEMENTS TO REDUCE INFILTRATION/INFLOW

CONTRACT NO. CWF 2016-06

NO.	DATE	ISSUED FOR	BY

COPYRIGHT: ARCADIS U.S., INC.

DATE: AUGUST 2020
PROJECT NO.: 05654065.0000
FILE NAME: BID SET
DESIGNED BY: SPM
DRAWN BY: SPM
CHECKED BY: SRH

SHEET TITLE

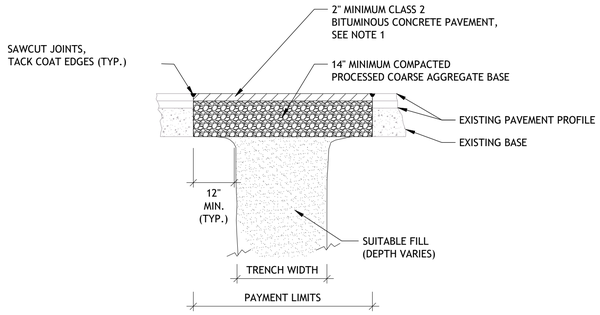
DETAILS SHEET 2

SCALE: NOT TO SCALE

D-2

SHEET 21 OF 24

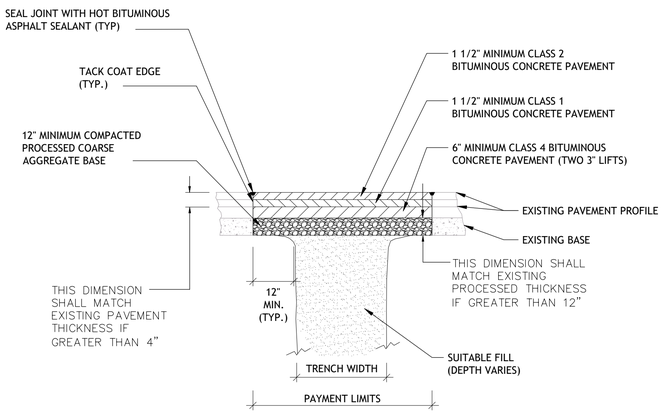
User:SMITCHELL Spec:AUS-NCSMOD File:G:\CADD\ACAD\PROJ\05654065.0000 - EHHH SEWER REHAB\BID SET\BID SET DESIGN PLANS - CWF2016-06.DWG Scale:1:1 SavedDate:8/4/2020 Time:09:52 Plot Date: Mitchell, Sean; 8/4/2020 09:53 ; Layout:D-2



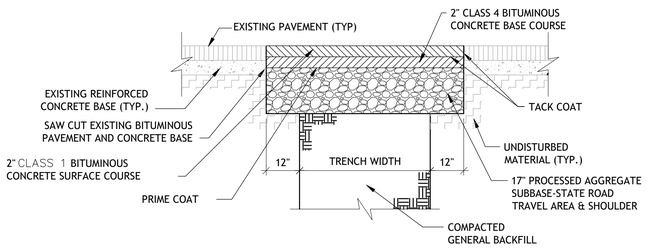
TEMPORARY PAVEMENT REPAIR
ON COLLECTOR STREETS
NOT TO SCALE

NOTES:

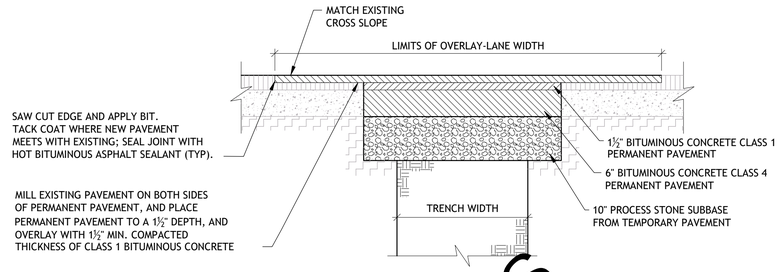
1. AFTER NOVEMBER 15TH, CLASS 5 MIX SHALL BE USED INSTEAD OF CLASS 2.



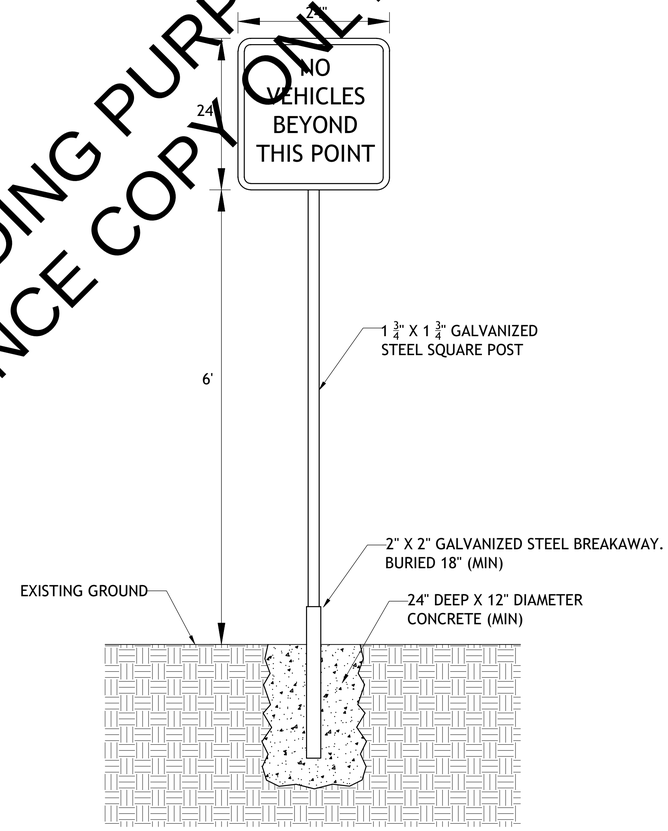
PERMANENT PAVEMENT REPAIR
ON COLLECTOR STREETS
NOT TO SCALE



STATE ROAD TEMPORARY PAVEMENT DETAIL
NOT TO SCALE



STATE ROAD PERMANENT PAVEMENT DETAIL
NOT TO SCALE



VEHICLE RESTRICTION SIGN INSTALLATION
NOT TO SCALE

NOTES:

1. SIGN SHALL BE .080" ENGINEERING GRADE REFLECTIVE ALUMINUM.
2. SIGN SHALL BE WHITE WITH 3" TALL RED LETTERING AND A RED BORDER.
3. LOCATIONS OF TWO (2) VEHICLE RESTRICTION SIGNS TO BE DETERMINED BY THE ENGINEER. GENERAL VICINITIES ARE SHOWN ON SHEET C-13.

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CONSULTANTS

SEALS

EAST HAVEN AND HAMDEN, CONNECTICUT

GNHWPCA

SEWER SYSTEM IMPROVEMENTS TO REDUCE INFILTRATION/INFLOW

CONTRACT NO.
CWF 2016-06

NO.	DATE	ISSUED FOR	BY

COPYRIGHT: ARCADIS U.S., INC.

DATE:	AUGUST 2020
PROJECT NO.:	05654065.0000
FILE NAME:	BID SET
DESIGNED BY:	SPM
DRAWN BY:	SPM
CHECKED BY:	SRH

SHEET TITLE

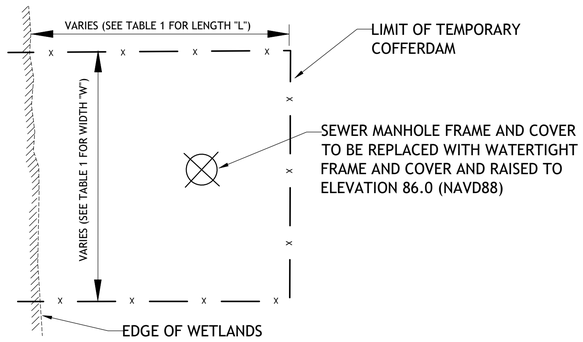
DETAILS SHEET 3

SCALE: NOT TO SCALE

D-3

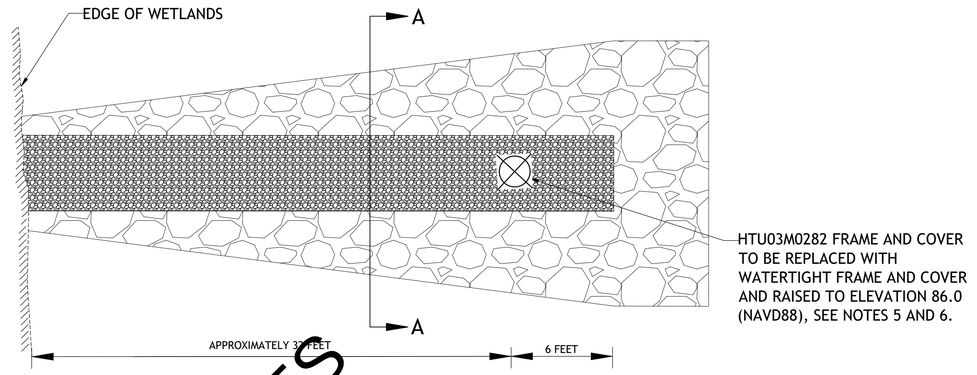
SHEET 22 OF 24

User:SMITCHELL Spec:AUS-NCSM0D File:G:\CADD\ACAD\PROJ\05654065.0000 - EH&H SEWER REHAB\BID SET\BID SET DESIGN PLANS - CWF2016-06.DWG Scale:1:1 SavedDate:7/24/2020 Time:10:34 Plot Date: Mitchell, Sean; 7/24/2020; 11:56 ; Layout:D-3



NOTES:

1. TEMPORARY, PORTABLE COFFERDAM SHALL PROVIDE MEANS OF WATER DIVERSION.
2. CONTRACTOR SHALL LAYOUT COFFERDAM TO PROVIDE ADEQUATE CLEARANCE IN ALL DIRECTIONS AS REQUIRED FOR DEWATERING, RAISING OF MANHOLE FRAMES AND COVERS AND CONSTRUCTION OF THE PERMANENT MANHOLE ACCESS.
3. FULL HEIGHT OF COFFERDAM SHALL PROVIDE A FREEBOARD OF AT LEAST 1 FOOT ABOVE THE WATER LEVEL AND BE DESIGNED TO HOLD BACK WATER, PREVENT WATER FROM ENTERING THE DRY WORK AREA, AND SUPPORT THE LOADING OF THE SYSTEM AND ALL EXTERNAL FORCES.
4. INSTALLATION AND REMOVAL OF COFFERDAM SHALL BE PERFORMED IN WET CONDITIONS.
5. REFER TO PERMANENT MANHOLE ACCESS PENINSULA FOR TEMPORARY COFFERDAM PROFILE VIEW.

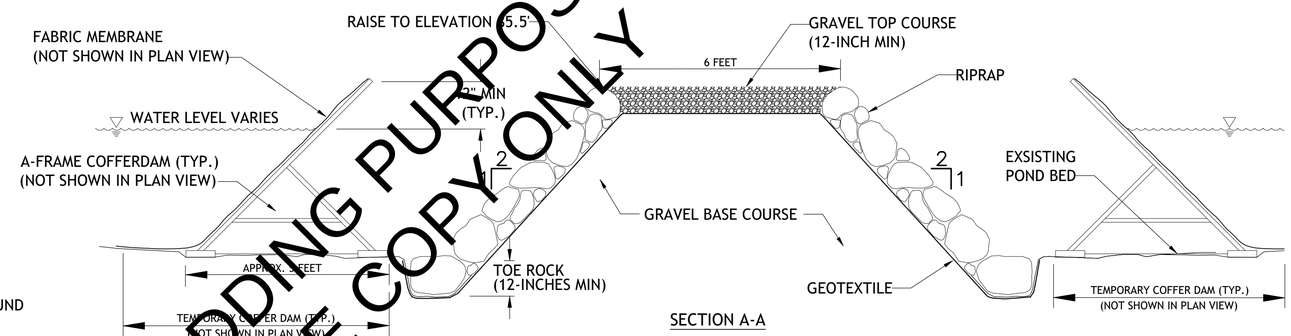


PLAN VIEW

TABLE 1
APPROXIMATE DIMENSIONS OF COFFERDAMS

MANHOLE ID	EXISTING RIM ELEV.	PROPOSED RIM ELEV.	APPROX. LENGTH OF L	APPROX. WIDTH OF W	TEMPORARY IMPACT (SF)	PERMANENT IMPACT (SF)
HTU03M0281	82.21'	86.0'	30'	20'	600	–
HTU03M0280	82.21'	86.0'	40'	20'	800	–
HTU03M0282	84.21'	86.0'	55'	50'	2,750	1,100
HTU03M0283	84.21'	86.0'	20'	20'	400	–
HTU03M0284	85.21'	86.0'	20'	20'	400	–
TOTAL	–	–	–	4,950	1,100	

TEMPORARY COFFERDAM
NOT TO SCALE

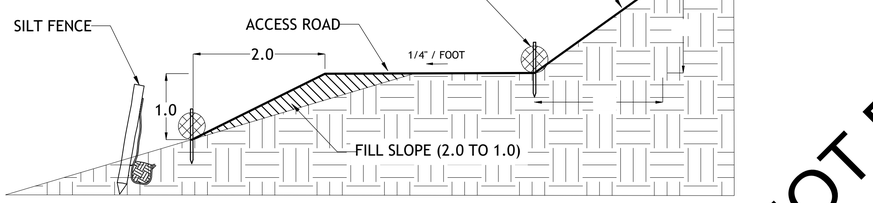


SECTION A-A

NOTES:

1. RIPRAP SHALL BE IN ACCORDANCE WITH CTDOT FORM 817, SECTION M.12.02, FOR INTERMEDIATE RIPRAP AND SHALL BE PLACED AT A DEPTH NO LESS THAN 24 INCHES.
2. GRAVEL BASE COURSE SHALL BE IN ACCORDANCE WITH CTDOT FORM 817, SECTION M.02.03 GRADING TYPE "A"
3. GRAVEL TOP COURSE SHALL BE IN ACCORDANCE WITH CTDOT FORM 817, SECTION M.02.03 GRADING TYPE "C"
4. THE FLOODPLAIN COMPENSATORY STORAGE REQUIREMENT DUE TO CONSTRUCTION OF THE PERMANENT MANHOLE ACCESS PENINSULA IS APPROXIMATELY 150 CUBIC YARDS
5. MANHOLE FRAME TO BE SECURED WITH FOUR (4) 4-3/4" TYPE 316 STAINLESS STEEL STUD TYPE CONCRETE ANCHORS AND STAINLESS STEEL BEVELED WASHERS, PER WATERTIGHT FRAME AND COVER DETAIL ON SHEET D-2.
6. COAT EXTERIOR OF FRAME AND ALL NEW CONSTRUCTION MATERIAL WITH 2" (MIN.) THICK CEMENT MORTAR AND 500 MILS UV RESISTANT EPOXY TO 1-FOOT BELOW EXISTING MANHOLE STRUCTURE.

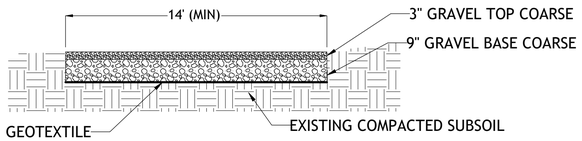
PERMANENT MANHOLE ACCESS PENINSULA DETAIL
NOT TO SCALE



NOTES:

1. CONTRACTOR SHALL SELECTIVELY CUT AND REMOVE TREES, BRUSH, STUMPS AND ROCK AS NECESSARY FOR CUT AND FILL AND CONSTRUCTION OF ACCESS ROAD.
2. CUT SLOPES SHALL NOT BE STEEPER THAN 1.5 TO 1.0. FILL SLOPES SHALL NOT BE STEEPER THAN 2.0 TO 1.0.
3. ACCESS ROAD AND CUT AND FILL SHALL BE ABOVE ELEVATION 100 FEET NAVD88. LOCATION OF BORROW MATERIAL SHALL BE DETERMINED BY THE ENGINEER.
4. COIR FIBER LOGS TO BE INSTALLED AS SHOWN AND IN ACCORDANCE WITH THE COIR FIBER LOG INSTALLATION DETAIL.
5. WHERE CUT SLOPE IS LESS THAN 3.0 TO 1.0, COIR FIBER LOGS TO BE INSTALLED AT BOTTOM OF FILL SLOPE ONLY.
6. COIR FIBER LOGS TO REMAIN IN PLACE AT COMPLETION OF CONSTRUCTION.
7. CONTRACTOR SHALL SEED ALL DISTURBED AREAS AS SPECIFIED AND MAINTAIN SITE RESTORATION UNTIL PLANT GROWTH IS ESTABLISHED.
8. SILT FENCE TO BE REMOVED AFTER PLANT GROWTH IS ESTABLISHED.

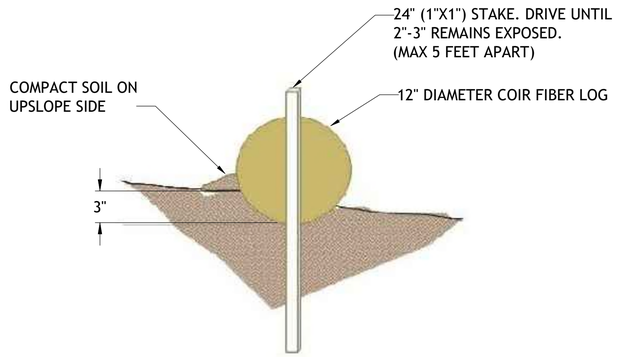
ACCESS ROAD CUT AND FILL DETAIL
NOT TO SCALE



NOTES:

1. GRAVEL BASE COURSE SHALL BE IN ACCORDANCE WITH CTDOT FORM 817, SECTION M.02.03 GRADING TYPE "A"
2. GRAVEL TOP COURSE SHALL BE IN ACCORDANCE WITH CTDOT FORM 817, SECTION M.02.03 GRADING TYPE "C"

ACCESS ROAD DETAIL
NOT TO SCALE



COIR FIBER LOG INSTALLATION DETAIL
NOT TO SCALE

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CONSULTANTS

SEALS

STATE OF CONNECTICUT · SCOTT R. HAYNES · No. 30930 · LICENSED PROFESSIONAL ENGINEER · 8-5-2020

EAST HAVEN AND HAMDEN, CONNECTICUT

GNHWPCA

SEWER SYSTEM IMPROVEMENTS TO REDUCE INFILTRATION/INFLOW

CONTRACT NO.
CWF 2016-06

NO.	DATE	ISSUED FOR	BY

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DATE: AUGUST 2020
PROJECT NO.: 05654065.0000
FILE NAME: BID SET
DESIGNED BY: SPM
DRAWN BY: SPM
CHECKED BY: SRH

SHEET TITLE

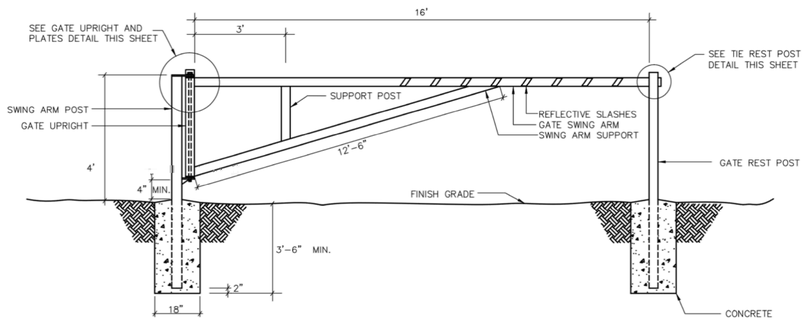
DETAILS SHEET 4

SCALE: AS SHOWN

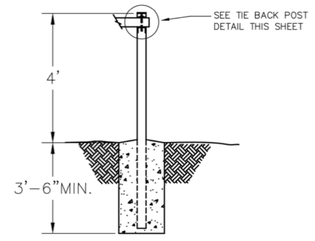
D-4

SHEET 23 OF 24

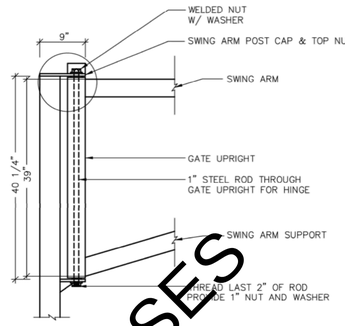
User: SMITCHELL Spec: AUS-NCSMOD File: G:\CADD\ACAD\PROJ\05654065.0000 - EHWH SEWER REHAB\BID SET\BID SET CWF2016-06 C-12, C-13, D-4 (PAE).DWG Scale:1:1 SavedDate: 7/24/2020 Time: 17:09 Plot Date: Mitchell, Sean; 7/24/2020; 17:11 - Layout: D-4



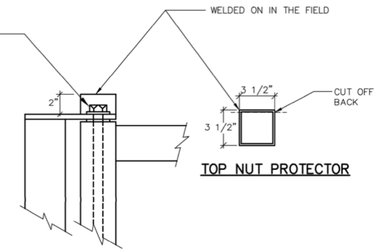
GATE ELEVATION
N.T.S.



FRONT ELEVATION
TIE BACK POST
N.T.S.

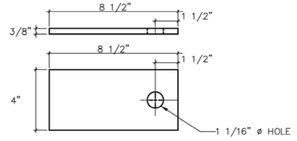


GATE UPRIGHT AND PLATES
SCALE: 1"

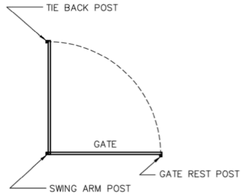


TOP NUT PROTECTOR

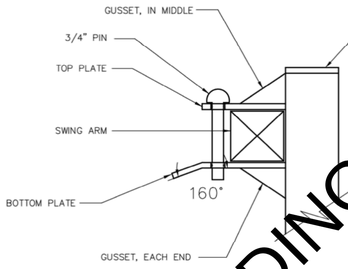
GATE UPRIGHT/SWING ARM FOOT
N.T.S.



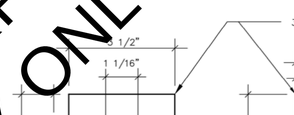
SWING ARM POST CAP
SCALE: 1/4"=1"



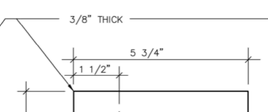
POST LAYOUT PLAN
N.T.S.



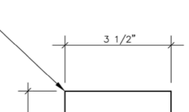
SIDE ELEVATION
TIE BACK POST
SCALE: 1/2"=1"



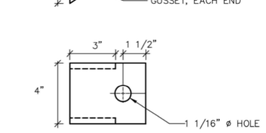
GATE UPRIGHT TOP AND BOTTOM CAPS
SCALE: 1/2"=1"



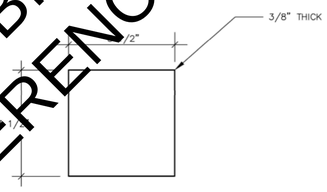
REST POST / TIE-BACK POST TOP AND BOTTOM PLATES
SCALE: 1/2"=1"



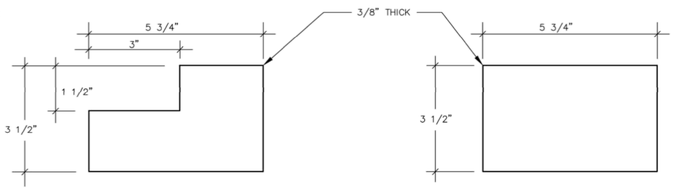
REST POST BOTTOM PLATE END SKIRT
SCALE: 1/2"=1"



LOWER GATE SUPPORT
SCALE: 1/2"=1"

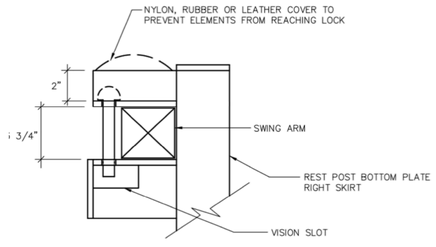


TIE-BACK POST CAP
SCALE: 1/2"=1"

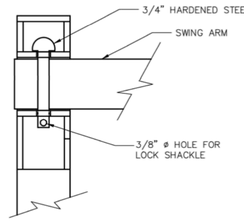


REST POST BOTTOM PLATE RIGHT SKIRT
SCALE: 1/2"=1"

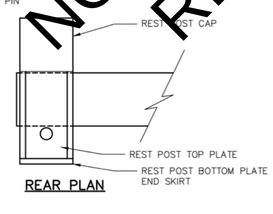
REST POST BOTTOM PLATE LEFT SKIRT
SCALE: 1/2"=1"



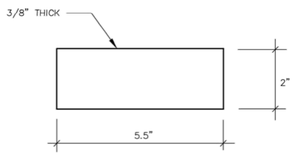
REST POST
SIDE ELEVATION
N.T.S.



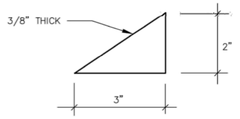
REST POST
REAR ELEVATION
N.T.S.



REAR PLAN
N.T.S.



REST POST
SUPPORT GUSSETS
SCALE: 1/2"=1"



TIE-BACK POST / LOWER GATE SUPPORT GUSSETS
SCALE: 1/2"=1"

NOTES:
1. ALL WELDS TO BE CONTINUOUS MIN. SIZE = 1/8"
2. GATE TO SWING LEVEL FOR CLOSED POSITION
3. BARWAY GATE DETAIL PROVIDED BY STATE OF CONNECTICUT D.E.E.P.
5. GATE PAINT TO BE SELECTED BY THE STATE

ACCESS GATE DETAIL
NOT TO SCALE

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SEALS

STATE OF CONNECTICUT
SCOTT R. HAYDEN
No. 30930
LICENSED PROFESSIONAL ENGINEER
8-5-2020

EAST HAVEN AND HAMDEN, CONNECTICUT

GNHWPCA

SEWER SYSTEM IMPROVEMENTS TO REDUCE INFILTRATION/INFLOW

CONTRACT NO.
CWF 2016-06

NO.	DATE	ISSUED FOR	BY

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DATE: AUGUST 2020
PROJECT NO.: 05654065.0000
FILE NAME: BID SET
DESIGNED BY: SPM
DRAWN BY: SPM
CHECKED BY: SRH

SHEET TITLE

DETAILS SHEET 5

SCALE: NOT TO SCALE

D-5
SHEET 24 OF 24

User: SMITCHELL Spec: AUS-NCSM00 File: G:\CAD0\ACAD\PROJ\05654065.0000 - EHAH SEWER REHAB\BID SET\BID SET DESIGN PLANS - CWF2016-06.DWG Scale:1:1 SavedDate:7/24/2020 Time:11:57 Plot Date: Mitchell, Sean: 7/24/2020: 11:58 ; Layout:D-5