BENCHMARKS

DATUM: NAVD88

BM A:
DESC. BENCH TIE ON SOUTH SIDE OF UTILITY POLE
ELEV = 952.871'

BM B:
DESC. TOP ARROW OF HYDRANT
ELEV = 960.727'

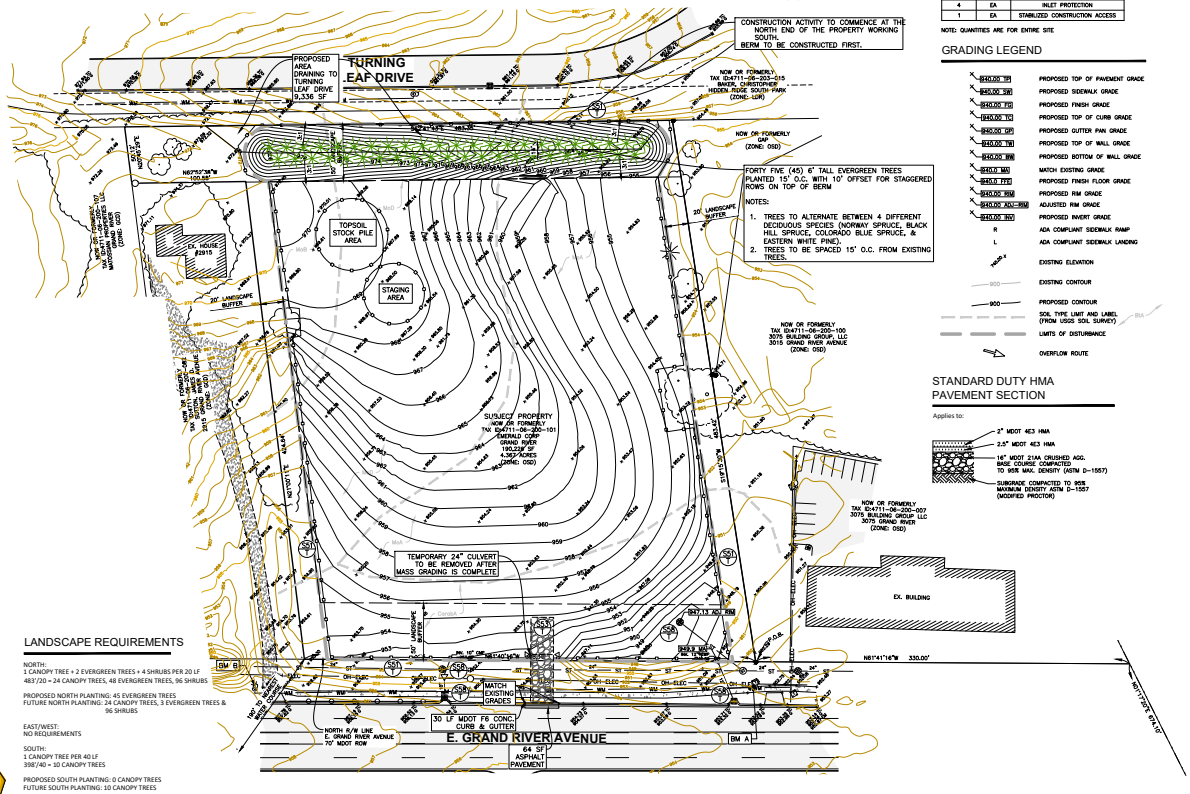
SOILS INFO

SOIL TYPES ARE ACCORDING TO THE USDA SOIL SURVEY WEB SITE (https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm)

SOIL TYPE LIMIT AND LABEL

- CarabA: CARLISLE MUCK, 0-2% SLOPES
- MoA: WAWASEE LOAM, 0-2% SLOPES
- MoB: WAWASEE LOAM, 2-6% SLOPES
- MoD: MIAMI LOAM, 12-18% SLOPES

	CONSTRUCTION SEQUENCE	OPERATION TIME SCHEDULE – BEGINNING APRIL 2024								
		APR			MAY			JUN		
1	CONTRACTOR SHALL INSTALL SILT FENCE AS SHOWN ON APPROVED PLANS.									
3	REMOVE ALL TOPSOIL AND ORGANIC MATTER. TOPSOIL MAY BE STORED ON SITE IN DESIGNATED AREA TO BE USED FOR FUTURE PLANTING AND FILL AREAS. TRUCK REMAINING TOP SOIL OFFSITE AND PROPERLY DISPOSE.									
4	PLACE INLET FILTERS AT CATCH BASINS THROUGHOUT SITE.									
6	FINISH GRADE AND STABILIZE AS SOON AS POSSIBLE. STABILIZE ALL DISTURBED AREAS WITH CLASS A SEED AND MULCH. IN AREAS OF SLOPES OF 1:4 OR STEEPER, CONTRACTOR TO SEED AND INSTALL PEGGED IN PLACE EROSION CONTROL BLANKETS.									
7	REPAIR/CLEAN INLET FILTERS AS REQUIRED.									
10	REMOVE TEMPORARY SOIL EROSION MEASURES ONCE SEEDED VEGETATION HAS BEEN ESTABLISHED. CLEAN ALL AFFECTED STORM STRUCTURES AS NECESSARY.									



LANDSCAPE REQUIREMENTS

NORTH:
1 CANOPY TREE + 2 EVERGREEN TREES + 4 SHRUBS PER 20 LF
483'/20 = 24 CANOPY TREES, 48 EVERGREEN TREES, 96 SHRUBS

PROPOSED NORTH PLANTING: 45 EVERGREEN TREES
FUTURE NORTH PLANTING: 24 CANOPY TREES, 3 EVERGREEN TREES & 96 SHRUBS

EAST/WEST:
NO REQUIREMENTS

SOUTH:
1 CANOPY TREE PER 40 LF
398'/40 = 10 CANOPY TREES

PROPOSED SOUTH PLANTING: 0 CANOPY TREES
FUTURE SOUTH PLANTING: 10 CANOPY TREES

SESC LEGEND

- SILT FENCE
- STABILIZED CONSTRUCTION ACCESS
- RIP RAP

EROSION CONTROL QUANTITIES

Disturbed Area: 3.84 Acres

QTY	UNIT	ITEM
1742	LF	SILT FENCE
4	EA	INLET PROTECTION
1	EA	STABILIZED CONSTRUCTION ACCESS

NOTE: QUANTITIES ARE FOR ENTIRE SITE

GRADING LEGEND

830.00 TP	PROPOSED TOP OF PAVEMENT GRADE
830.00 SW	PROPOSED SIDEWALK GRADE
830.00 FG	PROPOSED FINISH GRADE
830.00 TC	PROPOSED TOP OF CURB GRADE
830.00 GP	PROPOSED GUTTER PAN GRADE
830.00 TW	PROPOSED TOP OF WALL GRADE
830.00 BW	PROPOSED BOTTOM OF WALL GRADE
830.00 MG	MATCH EXISTING GRADE
830.00 FFG	PROPOSED FINISH FLOOR GRADE
830.00 RIM	PROPOSED RIM GRADE
830.00 ADJ-RIM	ADJUSTED RIM GRADE
830.00 INV	PROPOSED INVERT GRADE
R	ADA COMPLIANT SIDEWALK RAMP
L	ADA COMPLIANT SIDEWALK LANDING
962.0	EXISTING ELEVATION
900	EXISTING CONTOUR
900	PROPOSED CONTOUR
BM	SOIL TYPE LIMIT AND LABEL (FROM USGS SOIL SURVEY)
	LIMITS OF DISTURBANCE
	OVERFLOW ROUTE

STANDARD DUTY HMA PAVEMENT SECTION

Applies to:

- 2" MDOT 4E3 HMA
- 2.5" MDOT 4E3 HMA
- 16" MDOT 21AA CRUSHED AGG. BASE COURSE COMPACTED TO 95% MAX. DENSITY (ASTM D-1557)
- SUBGRADE COMPACTED TO 95% MAXIMUM DENSITY ASTM D-1557 (MODIFIED PROCTOR)

DTMB SOIL EROSION & SEDIMENTATION CONTROL MEASURES

MICHIGAN DEPARTMENT OF TECHNOLOGY, MANAGEMENT, AND BUDGET (DTMB)

EROSION CONTROLS			
KEY	BEST MANAGEMENT PRACTICES	SYMBOL	WHERE USED
E6	MULCH		FOR USE IN AREAS SUBJECT TO ERODING FORCES OR AS SPACER RING ON ON SEMI-SEEDED AREAS.
E8	PERMANENT SEEDING		STABILIZATION METHOD UTILIZED ON SITES WHERE ENTIRE FINISH GRADE HAS BEEN COMPLETED (FINAL GRADING ATTAINED).
SEDIMENT CONTROLS			
KEY	BEST MANAGEMENT PRACTICES	SYMBOL	WHERE USED
S51	SILT FENCE		USE ADJACENT TO CRITICAL AREAS, TO PREVENT SEDIMENT LADEN SHEET FLOW FROM ENTERING THESE AREAS.
S53	STABILIZED CONSTRUCTION ACCESS		USED AT EVERY POINT WHERE CONSTRUCTION TRAFFIC ENTERS OR LEAVES A CONSTRUCTION SITE.
S55	SEDIMENT BASIN		AT THE OUTLET OF DISTURBED AREAS AND AT THE LOCATION OF A PERMANENT DETENTION BASIN.
S58	INLET PROTECTION FABRIC DROP		USE AT STORMWATER INLETS, ESPECIALLY AT CONSTRUCTION SITES.
EROSION & SEDIMENT CONTROLS			
KEY	BEST MANAGEMENT PRACTICES	SYMBOL	WHERE USED
ES31	CHECK DAM		USED TO REDUCE SURFACE FLOW VELOCITIES WITHIN CONCENTRATED AND EXISTING FLOW CHANNELS.

TEMPORARY PERMANENT

EROSION CONTROL STANDARDS

1. ALL EROSION AND SEDIMENT CONTROL WORK SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE LIVINGSTON COUNTY DRAIN COMMISSIONER'S OFFICE.
2. DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR FOR EFFECTIVENESS OF EROSION AND SEDIMENTATION CONTROL MEASURES, AND ANY NECESSARY REPAIRS SHALL BE PERFORMED WITHOUT DELAY.
3. EROSION AND ANY SEDIMENTATION FROM WORK ON THIS SITE SHALL BE CONTAINED ON THE SITE AND NOT ALLOWED TO COLLECT ON ANY OFF-SITE AREAS OR IN WATERWAYS. WATERWAYS INCLUDE BOTH NATURAL AND MAN-MADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES AND PONDS.
4. CONTRACTOR SHALL APPLY TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES WHEN REQUIRED AND AS DIRECTED ON THESE PLANS. CONTRACTOR SHALL REMOVE TEMPORARY MEASURES AS SOON AS PERMANENT STABILIZATION OF SLOPES, DITCHES AND OTHER CHANGES HAS BEEN ACCOMPLISHED.
5. STAGING OF THE WORK WILL BE DONE BY THE CONTRACTOR AS DIRECTED IN THESE PLACES AND AS REQUIRED TO INSURE PROGRESSIVE STABILIZATION OF DISTURBED AREAS.
6. SOIL EROSION CONTROL PRACTICES WILL BE ESTABLISHED IN EARLY STAGES OF CONSTRUCTION BY THE CONTRACTOR. SEDIMENT CONTROL PRACTICES WILL BE APPLIED AS A PERIMETER DEFENSE AGAINST ANY TRANSPORTING OF SILT OFF THE SITE.
7. A CERTIFIED STORM WATER OPERATOR WILL BE NAMED ON THE MDEQ NOTICE OF COVERAGE FOR NPDES AS REQUIRED.
8. ALL DISTURBED AREAS ARE TO BE TOP SOILED AND SEEDED WITH THE FOLLOWING MIN RATIO:
   TOP-SOIL 3" IN DEPTH, GRASS SEED 218 LBS PER ACRE, FERTILIZER 150 LBS PER ACRE, STRAW MULCH 3" DEPTH 1.5 TO 2 TONS PER ACRE.
9. HYDRO-SEEDING IS NOT ACCEPTABLE FOR SLOPES EXCEEDING 1%. ON SLOPES OVER 1%, STABILIZATION SHALL BE DONE WITH SEED AND STRAW MULCH WITH A TACKIFIER, OR STRAW BLANKETS PEGGED IN PLACE.

SOIL EROSION CONTROL MAINTENANCE SCHEDULE AND NOTES.

1. CONTRACTOR MUST OBTAIN A SOIL EROSION AND SEDIMENTATION CONTROL PERMIT FROM THE LIVINGSTON COUNTY DRAIN COMMISSIONER'S OFFICE PRIOR TO COMMENCING WORK.
2. EARTHWORK SHALL BE LIMITED TO THE PROPOSED SITE AS SHOWN ON THE PLAN.
3. CONTRACTOR SHALL INSPECT THE SOIL EROSION/SEDIMENTATION CONTROL DEVICES ONCE A WEEK AND/OR WITHIN 24 HOURS OF A RAINFALL EVENT WHICH RESULTS IN A STORM WATER DISCHARGE FROM THE SITE. ANY DAMAGE TO EROSION CONTROL MEASURES MUST BE REPAIRED IMMEDIATELY.
4. ALL MUD OR DEBRIS TRACKED ONTO EXISTING PUBLIC ROADS FROM THE SITE DUE TO CONSTRUCTION SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR.
5. SILT FENCE MAINTENANCE SHALL INCLUDE THE REMOVAL OF ANY BUILT-UP SEDIMENT WHEN THE SEDIMENT HEIGHT ACCUMULATES TO 1/3 TO 1/2 OF THE HEIGHT OF THE FENCE. THE CONTRACTOR IS RESPONSIBLE TO REMOVE, REPLACE, RETRENCH OR RE-BACKFILL THE SILTATION FENCE SHOULD IT FAIL OR BE DAMAGED DURING CONSTRUCTION.
6. PERMANENT STABILIZATION MUST BE COMPLETED WITHIN 30 DAYS OF FINAL GRADING.
7. ACCESS ROADS MUST BE MAINTAINED AS NECESSARY, TO KEEP THEM EFFECTIVE. NEW LAYERS OF STONE MAY BE ADDED AS OLD LAYERS BECOME COMPACTED. STEPS SHOULD ALSO BE TAKEN TO REPAIR THE ACCESS ROADS IF RUTS OR PONDING WATER APPEARS.
8. INLET FILTERS SHOULD BE INSPECTED FOR BUILDUP OF SILT AND OTHER DEBRIS. THIS IS EVIDENT IF GEOTEXTILE/SOD STRUCTURE IS CAUSING FLOODING. MAINTENANCE WOULD CONSIST OF REMOVING OF SEDIMENTS WITH A STIFF BRISTLE BROOM OR SQUARE POINT SHOVEL. IF INLET FILTER IS BEYOND THIS LEVEL OF REPAIR, IT MAY BE NECESSARY TO REPLACE BOTH THE SOD AND GEOTEXTILE FILTER.
9. IF SOIL EROSION/SEDIMENT CONTROL MEASURES ARE INADEQUATE FOR THE SITE. THE PROPER EROSION CONTROL AUTHORITY MUST BE NOTIFIED.

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THE LOCATIONS AND ELEVATIONS OF UNDERGROUND UTILITIES AND STRUCTURES AS SHOWN ARE AS ACCURATE AS THE RECORDS AVAILABLE TO THE ENGINEER WHICH MAY OR MAY NOT BE COMPLETE OR ACCURATE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATIONS OF ALL UTILITIES, STRUCTURES AND OBSTRUCTIONS BEFORE BEGINNING CONSTRUCTION. THE ENGINEER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE CONSTRUCTION.

CLIENT :

CHESTNUT DEVELOPMENT
6253 GRAND RIVER AVE. SUITE 750
BRIGHTON, MI 48114
POC: STEVE GRONOW
517-552-2489

GRADING AND SESC PLAN

PARCEL 4711-06-200-101
PART OF NE 1/4, SEC. 6, T2N-R5E,
GENOA CHARTER TOWNSHIP
LIVINGSTON COUNTY, MICHIGAN

DATE	PLAN SUBMITTAL/REVISIONS
06/10/2024	REVISED PER TRAL SITE PLAN APPROVAL
04/24/2023	SITE PLAN REVIEW
06/26/2023	SITE PLAN REVIEW COMMENTS
09/07/2023	REVISED SUBMITTAL
09/26/2023	REVISED SUBMITTAL
09/07/2023	REVISED SITE PLAN SUBMITTAL
09/26/2023	REVISED SITE PLAN SUBMITTAL
4/22/2024	REVISED SITE PLAN SUBMITTAL

CURRENT ISSUE DATE: 4/24/2023

PROJECT NO: 22-168

SCALE: 1" = 40'
0 1/2" 1"

FIELD: KZ
DRAWN BY: MVJAN
DESIGN BY: BS
CHECK BY: MVJAP

C-7.0

NOT FOR CONSTRUCTION

FILE:P:\Projects\2022\22-168 Chestnut E Grand River Genoa\Dwg\Engineering\22-168_C-7.0_Grad-SESC.dwg PLOT DATE:6/10/2024 2:13 PM