



COMMUNITY DEVELOPMENT DEPARTMENT

45175 Ten Mile Road
Novi, MI 48375
(248) 347-0415 Phone
(248) 735-5600 Facsimile
www.cityofnovi.org

ZONING BOARD OF APPEALS STAFF REPORT

FOR: City of Novi Zoning Board of Appeals

ZONING BOARD APPEALS DATE: July 12, 2022

REGARDING: Parcel 50-22-23-151-039, 50-22-23-176-035 (PZ22-0030)

BY: Larry Butler, Deputy Director Community Development

I. GENERAL INFORMATION:

Applicant

Singh Development

Variance Type

Dimensional Variance

Property Characteristics

Zoning District: This property is zoned Town Center (TC-1)

Location: East of Novi Road, and South of Grand River Ave

Parcel #: 50-22-23-151-039, 50-22-23-176-035

Request

The applicant is requesting variances from the City of Novi Zoning Ordinance from Section 3.6.2.H to allow a 20-foot building setback adjacent to the RM-2 District (117 feet required, variance of 97 feet); and Section 5.10 to allow perpendicular parking on a major drive, which is not permitted. This property is zoned Town Center-1 (TC-1).

II. STAFF COMMENTS:

A revised proposed parcel description was submitted after the initial request. This eliminated the need for the frontage variance noted in the ZBA application and the notices.

III. RECOMMENDATION:

The Zoning Board of Appeals may take one of the following actions:

1. I move that we **grant** the variance in Case No. **PZ22-0030**, sought by _____, for _____ because Petitioner has shown practical difficulty requiring _____.

- (a) Without the variance Petitioner will be unreasonably prevented or limited with respect to use of the property because _____.

(b) The property is unique because_____.

(c) Petitioner did not create the condition because_____.

(d) The relief granted will not unreasonably interfere with adjacent or surrounding properties because_____.

(e) The relief if consistent with the spirit and intent of the ordinance because_____.

(f) The variance granted is subject to:

1._____.

2._____.

3._____.

4._____.

2. I move that we **deny** the variance in Case No. **PZ22-0030**, sought by _____, for _____ because Petitioner has not shown practical difficulty requiring _____.

(a) The circumstances and features of the property including _____ are not unique because they exist generally throughout the City.

(b) The circumstances and features of the property relating to the variance request are self-created because_____.

(c) The failure to grant relief will result in mere inconvenience or inability to attain higher economic or financial return based on Petitioners statements that _____.

(d) The variance would result in interference with the adjacent and surrounding properties by_____.

(e) Granting the variance would be inconsistent with the spirit and intent of the ordinance to_____.

Should you have any further questions with regards to the matter please feel free to contact me at (248) 347-0417.

Larry Butler - Deputy Director Community Development - City of Novi



Community Development Department

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ZONING BOARD OF APPEALS VARIANCE APPLICATION CHECKLIST

The following items are required for a complete Variance application. Incomplete applications will be returned.

Signed Application Form

Complete the Zoning Board of Appeals application form. Application must be signed by the applicant and the property owner (if different).

Response to Variance Review Standards – Dimensional, Use, or Sign

Select the applicable Review Standards for the requested Variance and complete in full. Use additional paper if needed. If you don't know which Review Standards to complete, call the Community Development Department at 248.347.0415 for guidance.

Dimensioned Site Plan (1 copy & 1 digital copy submitted as a PDF)

- Existing or proposed buildings or additions on the property.
- Number and location of all on-site parking spaces.
- Existing and proposed distances to adjacent property lines.
- Location of existing and proposed signs, if applicable.
- Any other information relevant to the Variance application.

Dimensioned Drawings and Plans (1 copy & 1 digital copy submitted as a PDF)

- Floor plans and elevations with all proposed buildings and additions.
- All existing and proposed signs on the property (photographs may be used).
- For use variances, include floor plan showing the existing and proposed layout and functions of each area.
- For multi-family residential structures or projects, a summary showing the existing and proposed number of dwelling units by type (efficiency, one-bedroom, two-bedroom, etc.)

Other Helpful Information – Optional (1 copy & 1 digital copy submitted as a PDF)

- Photographs of the lot or structure that shows the special conditions or circumstances described in the application.
- Photographs or maps that show how other properties in the area enjoy the same type of property rights related to the Variance.
- Letters of support from the neighbors who would be most affected by your request.

Fee (make check payable to the City of Novi)

Single Family Residential (Existing) \$200 (With Violation) \$250
Single Family Residential (New) \$250
Multiple/Commercial/Industrial \$300 (With Violation) \$400
Signs \$300 (With Violation) \$400
House Moves \$300
Special Meetings (At discretion of Board) \$600

Additional Information

In the course of reviewing the application, the Planning Department staff may request additional information from the applicant.

The Townes at Main Street ZBA variance request narrative.

The Townes at Main Street will be an exciting, modern addition to the Main Street area. The Townes at Main Street will provide (192) stylish, modern, townhomes that complement the area. The site will harmonize with the existing architecture to actualize Novi's Main Street Vision.

Planning Commission and City Council approval:

Planning Commission unanimously recommended approval on 4/27/2022, including all waivers. City Council unanimously approved the site plan on 5/23/2022, including all the required waivers.

Required Variances from ZBA:

The request for variance in this package is a matter for the Zoning Board of Appeals which could not be approved by Planning Commission or Council, despite their unanimous support for the project. The City of Novi Planning Staff identified the following zoning matters for your consideration as follows:

variance from Section 3.6.2.H to allow a 20-foot building setback adjacent to RM-2 District (117 feet required).

variance from Section 5.10 to allow perpendicular parking on a major drive.

We respectfully request the variances (above.) At this site, these are impractical standards to meet.

Setback: Requiring 117' setback between two residential districts does not appear anywhere else in Novi's ordinance. The reason it is written for a TC-1 is because TC-1 also permits commercial uses. No commercial use is proposed. The variance requested is supported by City of Novi Staff.

Perpendicular Parking: Enforcing this rule would eliminate the ADA accessible spaces. Since all the drives within the neighborhood are considered major drives, we are not allowed perpendicular visitor park spaces anywhere. This is the reason the applicant had to eliminate all the off street visitor parking. We could not eliminate the two remaining places because they are required to ADA accessible standards. City staff supports this variance.

The following pages are the required narratives in accordance with the City of Novi ZBA application. The Zoning Board of Appeals (ZBA) will review the application package and determine if the proposed variance meets the required standards for approval.

Standard #1. Circumstances or Physical Conditions.

Explain the circumstances or physical conditions that apply to the property that do not apply generally to other properties.

The shape, configuration, and location of the property is unique. The need for a variance is in large part due to the unique shape and circumstances peculiar to this property. These conditions create an unnecessary hardship that requires relief. The property is a jigsaw puzzle piece shaped property located in the center of the City of Novi "Town Center" area. TC permits both commercial and residential. Only residential is proposed so the additional setback is an unnecessary burden. The applicant is seeking similar treatment to the precedents that have been set for other residential properties and other ADA parking situations. The City of Novi Ordinance Section 3104 allows the ZBA to permit modification of the requirements outlined above and prescribed in the Ordinance because the shape & circumstances of the property is unique and not generally applicable to other properties in the TC-1 district. The legal requirement for standard one has been met.

Figure 1: Unique Property configuration & circumstances



Standard #2. Not Self-Created.

Describe the practical difficulty causing the need for the variance, that the need for the requested variance is not the result of actions of the property owner (**not self-created**).

*The applicant's problem is not self-created. The problem is an unnecessary hardship requiring relief. The applicant did not have a hand in creating the TC-1 ordinance, did not create the unusual property configuration, and did not create the ADA parking standards that are creating a conflict with these ordinances. Enforcing the standards would be unreasonable and impractical under the circumstances. The intent of the ordinance is to create adequate separations between different types of uses, however the residential uses are both the same making the requirement impractical. The proposed Townes at Main Street Plan meets the intended goal. The City staff has indicated support for these variances. The applicant had no hand in creating this impractical situation. The City of Novi Ordinance Section 3104 allows the ZBA to modify the requirements prescribed in the Zoning Ordinance because **the practical difficulty was not self-created**, and this legal standard has been met.*

Standard #3. Strict Compliance.

Explain how strict compliance with the regulations will be unnecessarily burdensome.

The property is in strict compliance with the permitted uses outlined in the City of Novi Zoning maps and ordinances for the TC-1 district. Strict compliance with the setback or parking configuration requirements detailed above create an unnecessary hardship on the applicant.

The project is an entirely RESIDENTIAL development adjacent to other residential uses and is encouraged by the city TC-1 zoning regulations. Requiring a commercial or industrial style setback between residential properties is a hardship and impractical.

Likewise, denying ADA accessible parking at the common area mail kiosk and the centralized play area is an unreasonable and possibly illegal requirement.

Strict compliance would prevent development at the density desired by the City and written into the TC-1 code. It would also prevent ADA compliance. Strict compliance with the requirement would be out of character for the area and would be contrary to the intent of the ordinance. The City of Novi Ordinance Section 3104 allows the ZBA to permit modification of the requirements prescribed in the Ordinance because strict compliance would force the applicant into unreasonable site plan configurations.

Standard #4. Minimum Variance Necessary.

Explain how the variance requested is the minimum variance necessary.

The variance requested is the minimum variance necessary to do substantial justice to the applicant as well as to other property owners in the district. All perpendicular parking except ADA has been eliminated from the plan. The residential setbacks are in line with setbacks between residential areas. Additional parking reductions and increased setbacks would be impractical and undesirable. For these reasons, the applicant is seeking the minimum variance necessary. The City of Novi Ordinance Section 3104 allows the ZBA to permit modification of the requirements prescribed in the Zoning Ordinance because the requested variance is the minimum variance necessary, and the legal standard has been met.

Standard #5. Adverse Impact on Surrounding Area.

Explain how the variance **will not cause an adverse impact** on surrounding property.

The variance will not alter the character of the area. It will not reduce property values, or the use and enjoyment of property in the neighborhood or in the TC-1 zoning district.

In fact, just the opposite. Development of the Townes at Main Street will create a dynamic, attractive city core that provides unique opportunities to participate in active community life and meet their needs for goods, services, housing, & entertainment. Increasing the permanent residential population living within the area will support the Main Street Area businesses. The Townes at Main Street will be an important addition to the Main Street core area by providing permanent residents to the area which will help bring the City's stated vision to life. Development will have a positive social impact. Providing an unnecessary setback or preventing ADA parking spaces would create a negative environment. Approving the variance will allow residences in compliance with the TC-1 district to be built on the parcel, providing substantial justice to the petitioner and surrounding property owners. The City of Novi Ordinance Section 3104 allows the ZBA to modify the requirements because the variance will not cause an adverse impact on surrounding parcels.

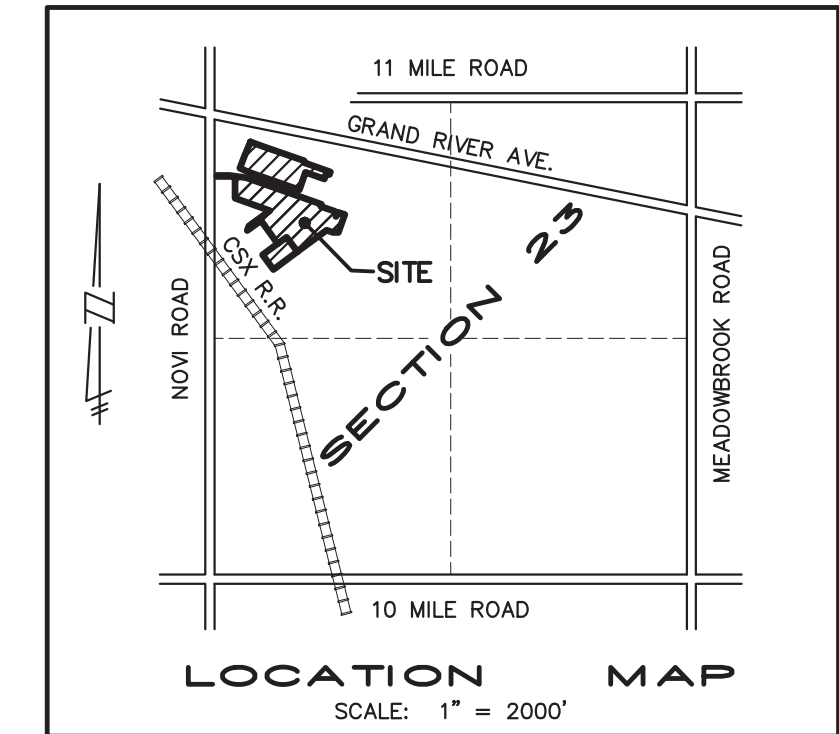
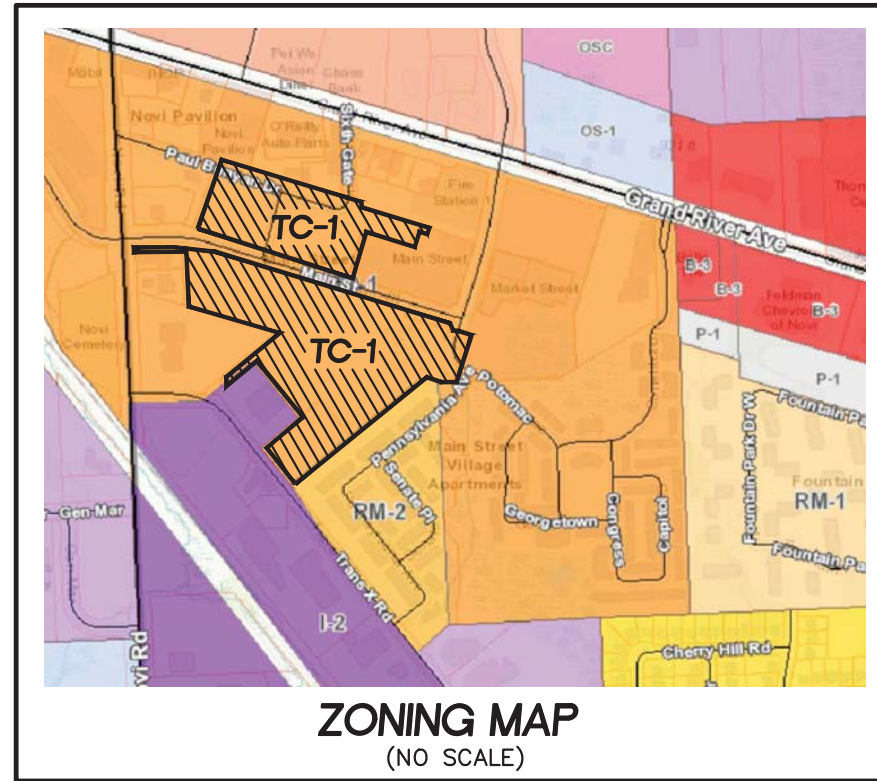
Petitioner has met all five requirements set forth in the ordinance to grant the variance. All the Elements of Practical Difficulty exist. We respectfully request your support.

PRELIMINARY SITE PLAN FOR:

THE TOWNES AT MAIN STREET

SECTION 23, TOWN 1 NORTH, RANGE 8 EAST,
CITY OF NOVI, OAKLAND COUNTY, MICHIGAN

PREPARED FOR:
SINGH DEVELOPMENT, LLC
7125 ORCHARD LAKE ROAD, SUITE 200
WEST BLOOMFIELD, MICHIGAN 48325
PHONE: 248.865.1600



LEGAL DESCRIPTIONS

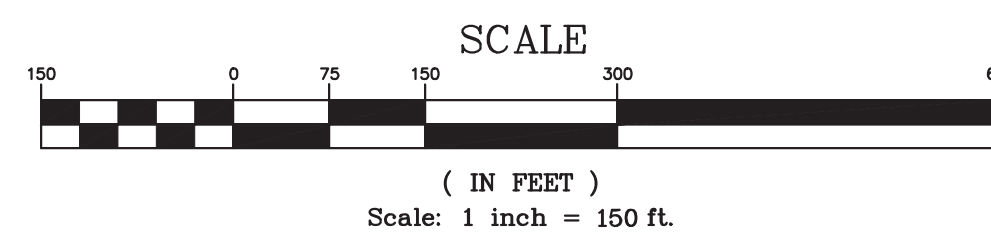
LEGAL DESCRIPTION FOR PARCEL I.D. #22-23-176-035 (NORTH PARCEL)
PART OF THE NW 1/4 OF SECTION 23, TOWNSHIP 1 NORTH, RANGE 8 EAST, CITY OF NOVI, OAKLAND COUNTY, MICHIGAN, MORE PARTICULARLY DESCRIBED AS: COMMENCING AT THE NORTHWEST CORNER OF SAID SECTION 23; THENCE ALONG THE WEST LINE OF SAID SECTION 23, DUE SOUTH 459.17 FEET; THENCE SOUTH 70°43'20" EAST 453.55 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 70°43'20" EAST 164.38 FEET; THENCE SOUTH 70°40'00" EAST 462.96 FEET; THENCE SOUTH 00°05'00" EAST 21.62 FEET; THENCE SOUTH 70°35'20" EAST 303.49 FEET; THENCE SOUTH 19°19'42" WEST 30.00 FEET; THENCE NORTH 70°35'20" WEST 58.00 FEET; THENCE SOUTH 19°19'42" WEST 65.00 FEET; THENCE NORTH 70°35'20" WEST 218.50 FEET; THENCE SOUTH 19°19'42" WEST 201.55 FEET; THENCE NORTH 70°40'18" WEST 594.09 FEET; THENCE NORTH 67°10'40" WEST 101.33 FEET; THENCE NORTH 21°51'23" EAST 311.03 FEET TO THE POINT OF BEGINNING. SAID PARCEL CONTAINS 238,818 SQUARE FEET, OR 5.48 ACRES, OF LAND.

LEGAL DESCRIPTION FOR PARCEL I.D. #22-23-151-039 (LARGE MIDDLE PARCEL)
PART OF THE NW 1/4 OF SECTION 23, TOWNSHIP 1 NORTH, RANGE 8 EAST, CITY OF NOVI, OAKLAND COUNTY, MICHIGAN, MORE PARTICULARLY DESCRIBED AS: COMMENCING AT THE NORTHWEST CORNER OF SAID SECTION 23; THENCE ALONG THE WEST LINE OF SAID SECTION 23, DUE SOUTH 976.10 FEET; THENCE DUE EAST 60.00 FEET TO THE POINT OF BEGINNING; THENCE DUE EAST 142.73 FEET; THENCE SOUTH 81°30'37" EAST 181.83 FEET; THENCE SOUTH 70°40'18" EAST 874.52 FEET; THENCE SOUTH 19°19'42" WEST 25.00 FEET; THENCE SOUTH 70°40'18" EAST 164.46 FEET; THENCE SOUTH 25°40'18" EAST 39.40 FEET; THENCE SOUTH 19°19'42" WEST 20.96 FEET; THENCE SOUTH 70°40'18" EAST 5.00 FEET; THENCE NORTH 19°19'42" EAST 51.32 FEET; THENCE SOUTH 70°40'18" EAST 81.43 FEET; THENCE SOUTH 19°19'42" WEST 208.78 FEET; THENCE NORTH 89°39'47" WEST 61.37 FEET; THENCE NORTH 70°45'15" WEST 72.73 FEET; THENCE SOUTH 53°38'45" WEST 396.82 FEET; THENCE NORTH 36°20'45" WEST 200.00 FEET; THENCE SOUTH 53°38'45" WEST 121.35 FEET; THENCE NORTH 36°19'15" WEST 312.40 FEET; THENCE SOUTH 53°33'45" WEST 184.33 FEET; THENCE NORTH 19°19'42" EAST 53.91 FEET; THENCE NORTH 53°29'08" EAST 285.74 FEET; THENCE NORTH 70°45'15" WEST 405.98 FEET; THENCE DUE NORTH 239.68 FEET; THENCE DUE WEST 199.78 FEET; THENCE DUE NORTH 12.09 FEET TO THE POINT OF BEGINNING. SAID PARCEL CONTAINS 465,902 SQUARE FEET, OR 10.70 ACRES, OF LAND.

LEGAL DESCRIPTION FOR PARCEL I.D. #22-23-151-013 (SOUTH PARCEL)
PART OF THE NW 1/4 OF SECTION 23, TOWNSHIP 1 NORTH, RANGE 8 EAST, CITY OF NOVI, OAKLAND COUNTY, MICHIGAN, MORE PARTICULARLY DESCRIBED AS: COMMENCING AT THE NORTHWEST CORNER OF SAID SECTION 23; THENCE ALONG THE WEST LINE OF SAID SECTION 23, DUE SOUTH 1137.17 FEET; THENCE SOUTH 70°45'15" EAST 1096.70 FEET; THENCE SOUTH 53°38'45" WEST 259.85 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 36°20'45" EAST 200.00 FEET; THENCE SOUTH 53°38'45" WEST 326.70 FEET; THENCE NORTH 36°20'45" WEST 200.00 FEET; THENCE NORTH 53°38'45" EAST 326.70 FEET TO THE POINT OF BEGINNING. SAID PARCEL CONTAINS 65,340 SQUARE FEET, OR 1.50 ACRES, OF LAND.

WAIVERS AND VARIANCES REQUESTED

1. FAÇADE WAIVER - WOOD, VINYL, AND CEMENT SIDING ARE NOT ALLOWED. A WAIVER COULD BE GRANTED FOR ACCENT PATTERNED OR TEXTURED SIDING UP TO 25%. THE PROPOSED FRONT FAÇADE INCLUDES 51% BRICK, 42% SIDING AND 8" ACCENT MATERIALS. A WAIVER TO APPROVE THE ARCHITECTURE AS SUBMITTED IS REQUESTED.
2. MAIN STREET DESIGN GUIDELINES WAIVER - THE PROPOSED ARCHITECTURE IS NOT CONSISTENT WITH THESE GUIDELINES. THE UNITS FACING MAIN STREET SHOULD HAVE A UNIQUE DESIGN. WAIVERS COULD BE CONSIDERED FOR THE REMAINING BUILDINGS. THE MAIN STREET FAÇADES HAVE BEEN REVISED TO BE CONSISTENT WITH THE MAIN STREET GUIDELINES. A WAIVER FOR THE DEVIATIONS IS REQUESTED.
3. ZONING ORDINANCE SECTION 3.6.2.H.I.A. VARIANCE REQUESTED - A SETBACK FROM THE RM-2 DISTRICT OF 3 FEET FOR EVERY 1 FOOT OF BUILDING HEIGHT. THE PROPOSED TOWNHOMES UNITS BACK UP TO EXISTING TOWNHOMES UNITS IN MAIN STREET VILLAGE II. THE INTENT OF THE ORDINANCE IS TO PROVIDE ADDITIONAL SETBACK FOR COMMERCIAL USES FROM EXISTING RESIDENTIAL ZONING. SINCE THE PROPOSED USE IS A MULTIPLE STORY TOWNHOME RESIDENTIAL USE BACKING UP TO AN EXISTING MULTIPLE STORY TOWNHOME RESIDENTIAL USE, THE ADDITIONAL SETBACK SHOULD NOT BE APPLICABLE. THE PROPOSED BUILDING TO BUILDING SPACING BETWEEN THE PROPOSED RESIDENTIAL USE IN THE TC-1 DISTRICT AND THE EXISTING RESIDENTIAL USE IN THE RM-2 DISTRICT IS APPROXIMATELY 115 FEET.
4. ZONING ORDINANCE SECTION 5.0. VARIANCE REQUESTED - LOADING ZONE - THE PLANNING REVIEW CHART INDICATES THAT A LOADING ZONE IS NOT APPLICABLE TO A RESIDENTIAL DEVELOPMENT. THE AECOM REVIEW LETTER INDICATES THAT A POTENTIAL VARIANCE MAY BE REQUIRED FOR SECTION 5.0 OF THE ZONING ORDINANCE. THE APPLICANT AGREES WITH THE CITY PLANNER THAT A LOADING ZONE SHOULD NOT BE APPLICABLE TO A RESIDENTIAL USE.
5. ZONING ORDINANCE SECTION 5.4.4. VARIANCE REQUESTED - TRASH RECEPTACLE - REQUIRES DEDICATED AREA FOR THE LOADING AND UNLOADING OF TRASH RECEPTACLES. TRASH WILL BE HANDLED VIA CURBSIDE PICKUP FOR EACH OF THE RESIDENTIAL UNITS. DEDICATED TRASH RECEPTACLE AREAS ARE NOT APPLICABLE.
6. ZONING ORDINANCE 4.8.2.A AND 4.8.2.B CITY COUNCIL WAIVER REQUESTED - ROOM COUNT - APPLICANT REQUESTS CITY COUNCIL TO INCREASE THE ALLOWABLE ROOM COUNT FROM 642 ROOMS TO 965 ROOMS.
7. ZONING ORDINANCE SECTION 5.5.3.A.II WAIVER REQUESTED - LANDSCAPE BERM SCREENING - A VARIANCE FOR PROVIDING A 10'-15" HIGH BERM ADJACENT TO THE I-2 ZONING DISTRICT AND A 6'-8" BERM ADJACENT TO COMMERCIAL AREAS IS REQUESTED. THE PROPOSED DEVELOPMENT IS LOCATED WITHIN THE TOWN CENTER DISTRICT AND IS INTENDED TO BE URBAN IN NATURE. BERM AREAS ARE GENERALLY SUBURBAN AND ARE INAPPROPRIATE IN THIS LOCATION. AN 8" TALL PRIVACY BRICK WALL IS PROPOSED IN-LEU OF THE BERM.
8. ZONING ORDINANCE SECTION 5.5.3.B.II.F WAIVER REQUESTED - RIGHT-OF-WAY LANDSCAPING - DUE TO EXISTING GRADES, A STORM SEWER IS PROPOSED ON THE SOUTH SIDE OF MAIN STREET PROHIBITING PLANTINGS. A WAIVER OF 19 TREES IS REQUESTED.
9. ZONING ORDINANCE SECTION 5.5.3.F.II.B.(1) WAIVER REQUESTED - REQUIRES 3 TREES PER MULTI-FAMILY UNIT - THIS REQUIREMENT CANNOT BE MET DUE TO LIMITED PLANTING AREA. A WAIVER OF 293 TREES IS REQUESTED.
10. ZONING ORDINANCE SECTION 5.5.3.F.II.B.(1) REQUIRING 75% OF THE TREES TO BE DECIDUOUS CANOPY OR LARGE EVERGREEN. A WAIVER OF 5% IS REQUESTED.
11. ZONING ORDINANCE SECTION 5.5.3.F.II.B.(3) LANDSCAPE WAIVER - REQUIRES 35% OF BUILDING FAÇADES FACING STREETS TO BE LANDSCAPED - THE PROPOSED UNITS ARE REAR LOADED TOWNHOMES, SO THE LANDSCAPE AREA IS LIMITED BY THE DRIVEWAYS. A WAIVER SCHEDULE IS SHOWN ON SHEET L-4. AMPLE LANDSCAPING IS SHOWN ON THE BUILDING FRONTS.
12. ZONING ORDINANCE SECTION 5.10 VARIANCE REQUESTED - PERPENDICULAR HANDICAP PARKING ON MAJOR DRIVE (STEINBECK CIRCLE) IN MAIN STREET NORTH.
13. CODE OF ORDINANCES, CHAPTER 12 ARTICLE 5 WETLANDS AND WATERCOURSE PROTECTION SECTION 12-173 REVIEW OF APPLICATIONS:
VARIANCE REQUESTED FOR ON-SITE MITIGATION. THE APPLICANT INTENDS TO CONSTRUCT A MIN. 0.61 ACRE WETLAND MITIGATION AREA OFF-SITE BUT WITHIN THE CITY LIMITS OF NOVI TO MITIGATE FOR 0.406 ACRE OF WETLAND FILL. THIS MITIGATION AREA IS SIZED AT A 1.5 TO 1 MITIGATION TO FILL RATIO. THE APPLICANT IS CONSIDERING TWO SITES WITHIN THE CITY LIMITS ON SINGH OWNED PROPERTIES. A VARIANCE IS REQUESTED FROM THE CODE OF ORDINANCES TO NOT HAVE TO BUILD ON-SITE WETLAND MITIGATION AREA.
14. ZONING ORDINANCE SECTION 5.10.1.B.v.d VARIANCE REQUESTED.
THREE (3) ACCESSIBLE SPACES ARE PROVIDED ON STEINBECK CIRCLE (A "MAJOR ROAD") AND ARE ORIENTED PERPENDICULAR TO THE ROAD. A VARIANCE TO ORIENT THESE THREE (3) SPACES PERPENDICULAR TO THE MAJOR ROAD IS REQUESTED.



SEIBER, KEAST ENGINEERING, L.L.C.

CONSULTING ENGINEERS

39205 COUNTRY CLUB DR., SUITE C8
FARMINGTON HILLS, MI 48331
PHONE: 248.308.3331

MAIN STREET NORTH & SOUTH
BOUNDARY SURVEY PREPARED BY:
THE UMLOR GROUP
49287 WEST ROAD,
WIXOM, MICHIGAN, 48393
PHONE: 248.773.7656

MAIN STREET SOUTH TOPOGRAPHIC
SURVEY PREPARED BY:
AMBIT LAND SURVEYORS, INC.
691 WING STREET, PLYMOUTH,
MICHIGAN, 48170
PHONE: 734.455.5501

MAIN STREET NORTH TOPOGRAPHIC
SURVEY PREPARED BY:
ALPINE ENGINEERING, INC.
46892 WEST ROAD , SUITE 109,
NOVI, MICHIGAN, 48377
PHONE: 248.926.3701

WETLAND FLAGGING PREPARED BY:
WILSON ROAD GROUP, INC.
56383 HAYES ROAD
SHELBY TWP., MICHIGAN,
48315
PHONE: 810.664.6300

LANDSCAPE AND WOODLAND
PLANS PREPARED BY:
ALLEN DESIGN, LLC
557 CARPENTER, NORTHVILLE,
MICHIGAN 48167
PHONE: 248.467.4668

SHEET INDEX:

ENGINEERING PLANS

1. COVER SHEET
2. BOUNDARY SURVEY AND EXISTING CONDITIONS PLAN
3. OVERALL SITE PLAN
4. GRADING, PAVING & UTILITY PLAN
5. STORM WATER MANAGEMENT PLAN
6. OFF-SITE STORM IMPROVEMENT PLAN
7. REGIONAL BASINS PLAN
8. REGIONAL BASINS CALCULATIONS
9. OPEN SPACE PLAN
10. SOIL BORINGS PLAN
11. SOIL BORINGS PLAN
12. FIRE TRUCK ROUTE PLAN
13. EXISTING EASEMENTS PLAN

LANDSCAPE PLANS

- L-1 LANDSCAPE PLAN
- L-2 LANDSCAPE PLAN
- L-3 LANDSCAPE PLAN
- L-4 UNIT TYPICALS
- L-5 EXISTING VEGETATION PLAN
- L-6 EXISTING VEGETATION LIST
- L-7 LANDSCAPE DETAILS

PHOTOMETRIC PLANS

- P1-P6 PHOTOMETRIC SITE PLAN

ARCHITECTURAL PLANS

- ELEVATION PLANS:
CP-4A EL. 1 - FRONT ELEV. - HIGH VIZ
CP-4A EL. 2 - FRONT ELEV.
CP-4A EL. 2
CP-4A EL. 3
- FLOOR PLANS:
A1 4-1.1 FIRST FLOOR
A1 4-2.1 SECOND FLOOR
A1 4-3.1 THIRD FLOOR
ROOF DECK OPTION:
A2 8-HA-G.1
CP-5B 3.2

BENCHMARKS (MAIN STREET NORTH)

CITY OF NOVI BENCHMARK 2314 - "X" ON SOUTHEAST FLANGE
BOLT OF FIRE HYDRANT LOCATED BETWEEN PARKING LOT #43151
"NOVI AUTO PARTS" AND SOUTH EDGE OF GRAND RIVER AVE.
ELEVATION 914.09

BM#1 - ARROW ON HYDRANT, NORTH SIDE OF MAIN ST., 450'
WEST OF MARKET ST.
ELEVATION 916.56 (CITY OF NOVI)

BM#2 - ARROW ON HYDRANT, 225' NORTH OF MAIN ST., 202'
SOUTHEAST OF THE SOUTHWEST CORNER OF FIRESTONE TIRE
BUILDING.
ELEVATION 920.08 (CITY OF NOVI)

BM#3 - ARROW ON HYDRANT, NORTH SIDE OF MAIN ST., 360'
EAST OF NOVI RD.
ELEVATION 915.65 (CITY OF NOVI)

BENCHMARKS (MAIN STREET SOUTH)

CITY OF NOVI BENCHMARK 2311 - "X" ON NORTH RIM OF SAN.
MANHOLE LOCATED ACROSS FROM INTERSECTION OF GEN-MAR
AND NOVI ROAD, 45' EAST OF NOVI RD, CENTERLINE AND 80'
NORTH OF GEN-MAR CENTERLINE.
ELEVATION 892.09

CITY OF NOVI BENCHMARK 2312 - "X" ON NORTH RIM OF
GATEWELL LOCATED IN THE SOUTHEAST QUAD OF MAIN STREET
AND NOVI ROAD INTERSECTION, 10' SOUTH OF BACK OF CURB
AND 5' SOUTHEAST OF TRAFFIC POLE.
ELEVATION 914.50

SITE BENCHMARK 1
RIM OF STORM MANHOLE LOCATED 260' EAST OF THE
CENTERLINE OF NOVI ROAD AND 20' NORTH OF THE CENTERLINE
OF TRANS-X DRIVE.
ELEVATION 911.93

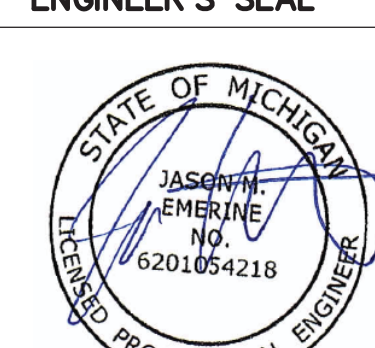
SITE BENCHMARK 2
RIM OF GATE VALVE AND WELL, LOCATED 75' EAST OF THE
CENTERLINE OF NOVI ROAD AND 50' SOUTH OF THE CENTERLINE
OF MAIN STREET.
ELEVATION 913.88

SITE BENCHMARK 3
RIM OF GATE VALVE AND WELL, LOCATED 30' NORTH OF THE
CENTERLINE OF MAIN STREET AND 80' WEST OF THE CENTERLINE
OF MARKET STREET. ELEVATION 911.88

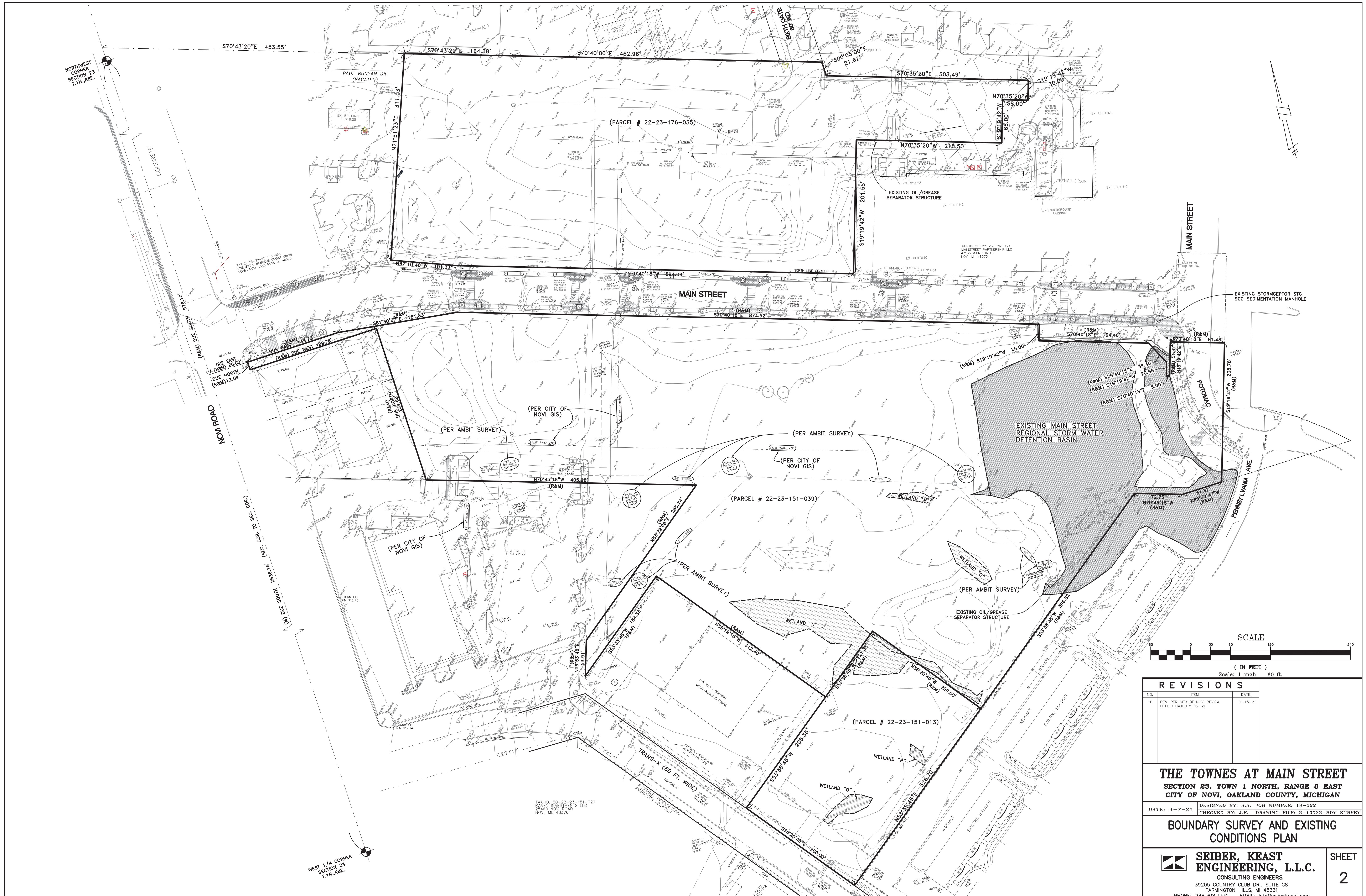
REVISIONS

NO.	ITEM	DATE
1.	REV. PER CITY OF NOVI REVIEW LETTER DATED 5-12-21	11-15-21
2.	REV. PER CITY OF NOVI REVIEW LETTER DATED 1-31-22	3-6-22

ENGINEER'S SEAL



DATE: 4-7-21 DESIGNED BY: A.A. CHECKED BY: J.E. JOB NUMBER: 19-022 DRAWING FILE: 1-19022-CV



NORTHWEST CORNER SECTION 23 T.1N. R.8E.

WEST 1/4 CORNER SECTION 23 T.1N. R.8E.

S70°43'20"E 453.55'

S70°43'20"E 164.38'

S70°40'00"E 462.96'

S70°35'20"E 303.49'

S19°19'42"W 30.00'

PAUL BUNYAN DR. (VACATED)

(PARCEL # 22-23-176-035)

EXISTING OIL/GREASE SEPARATOR STRUCTURE

EXISTING MAIN STREET REGIONAL STORM WATER DETENTION BASIN

EXISTING STORMCEPTOR STC 900 SEDIMENTATION MANHOLE

NOV ROAD

MAIN STREET

MAIN STREET

POTOMAC AVENUE

FENWICK AVENUE

(PER CITY OF NOVI GIS)

(PER AMBIT SURVEY)

(PER AMBIT SURVEY)

(PER CITY OF NOVI GIS)

(PER CITY OF NOVI GIS)

(PER AMBIT SURVEY)

(PER AMBIT SURVEY)

EXISTING OIL/GREASE SEPARATOR STRUCTURE

(PARCEL # 22-23-151-039)

WETLAND "M"

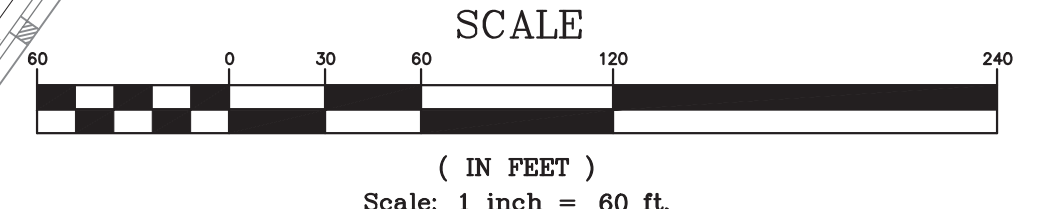
WETLAND "O"

WETLAND "P"

WETLAND "Q"

(PARCEL # 22-23-151-013)

TAX ID: 50-22-23-151-029
RAVEN INVESTMENTS LLC
43106 MAIN STREET
NOVI, MI 48376



REVISIONS

NO.	ITEM	DATE
1.	REV. PER CITY OF NOVI REVIEW LETTER DATED 5-12-21	11-15-21

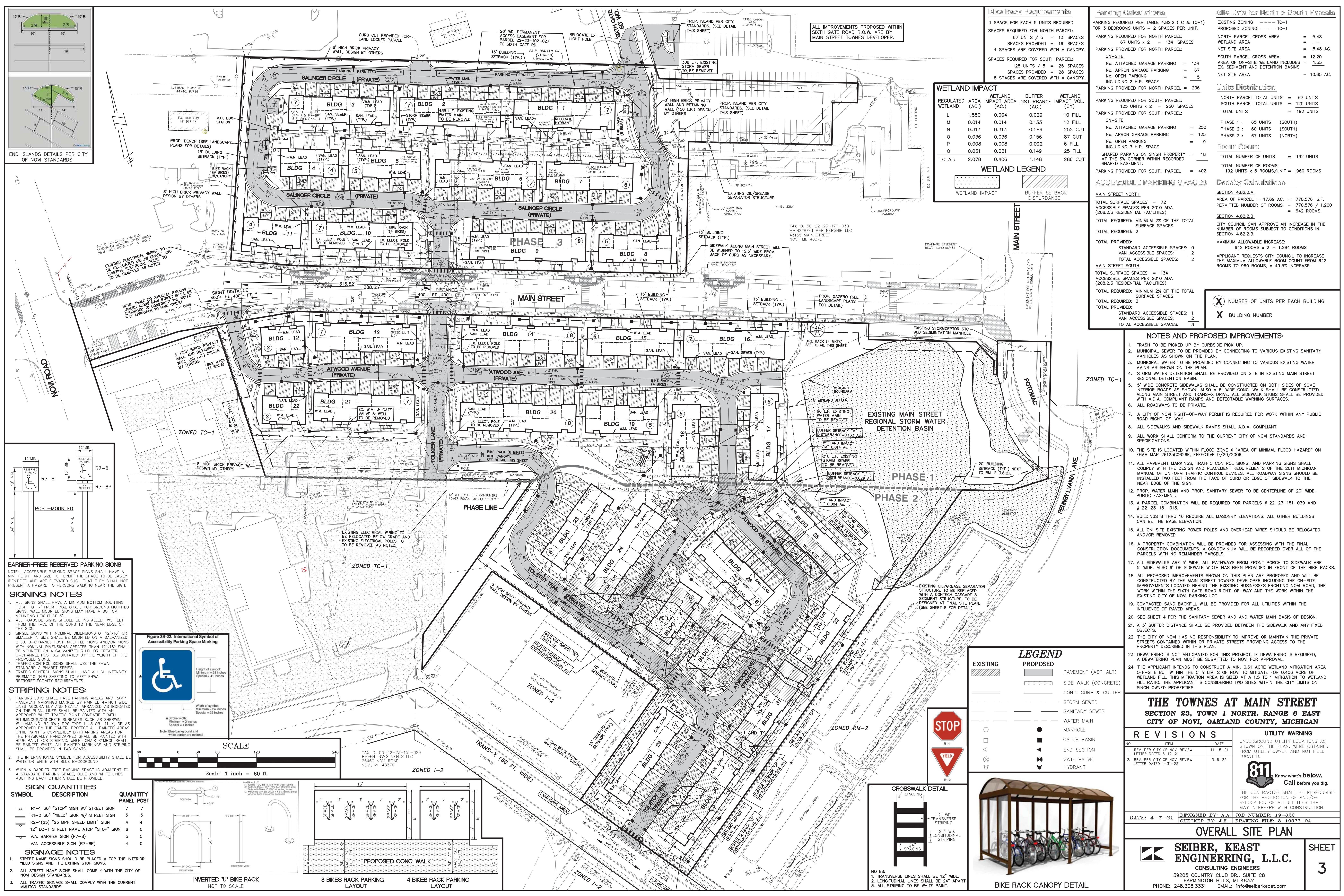
THE TOWNES AT MAIN STREET
SECTION 23, TOWN 1 NORTH, RANGE 8 EAST
CITY OF NOVI, OAKLAND COUNTY, MICHIGAN

DATE: 4-7-21 DESIGNED BY: A.A. JOB NUMBER: 19-022
CHECKED BY: J.E. DRAWING FILE: 2-19022-BDY SURVEY

BOUNDARY SURVEY AND EXISTING CONDITIONS PLAN

SEIBER, KEAST ENGINEERING, L.L.C.
CONSULTING ENGINEERS
39205 COUNTRY CLUB DR., SUITE C8
FARMINGTON HILLS, MI 48331
PHONE: 248.308.3331 EMAIL: info@seiberkeast.com

SHEET 2



Bike Rack Requirements

1 SPACE FOR EACH 5 UNITS REQUIRED
 SPACES REQUIRED FOR NORTH PARCEL:
 67 UNITS / 5 = 13 SPACES
 SPACES PROVIDED = 18 SPACES
 4 SPACES ARE COVERED WITH A CANOPY.

SPACES REQUIRED FOR SOUTH PARCEL:
 125 UNITS / 5 = 25 SPACES
 SPACES PROVIDED = 28 SPACES
 8 SPACES ARE COVERED WITH A CANOPY.

Parking Calculations

PARKING REQUIRED PER TABLE 4.82.2 (TC & TC-1) FOR 3 BEDROOM UNITS = 2 SPACES PER UNIT.
 PARKING PROVIDED FOR NORTH PARCEL:
 67 UNITS x 2 = 134 SPACES
 PARKING PROVIDED FOR SOUTH PARCEL:
 ON-SITE
 No. ATTACHED GARAGE PARKING = 134
 No. APRON GARAGE PARKING = 67
 No. OPEN PARKING = 5
 INCLUDING 2 H.P. SPACE
 PARKING PROVIDED FOR NORTH PARCEL = 206

Site Data for North & South Parcels

EXISTING ZONING --- TC-1
 PROPOSED ZONING --- TC-1
 NORTH PARCEL GROSS AREA = 5.48
 NETLAND AREA = 5.48 AC.
 SOUTH PARCEL GROSS AREA = 12.20
 AREA OF ON-SITE WETLAND INCLUDES EX. SEDIMENT AND DETENTION BASINS = 1.55
 NET SITE AREA = 10.65 AC.

WETLAND IMPACT

REGULATED WETLAND (AC.)	WETLAND IMPACT AREA (AC.)	BUFFER DISTURBANCE AREA (AC.)	WETLAND IMPACT VOL. (CY)
L	1.550	0.004	0.029
M	0.014	0.014	0.133
N	0.313	0.313	0.589
O	0.036	0.036	0.156
P	0.008	0.008	0.092
Q	0.031	0.031	0.149
TOTAL:	2.078	0.406	1.148



Unit Distribution

NORTH PARCEL TOTAL UNITS = 67 UNITS
 SOUTH PARCEL TOTAL UNITS = 125 UNITS
 TOTAL UNITS = 192 UNITS

PHASE 1 : 65 UNITS (SOUTH)
 PHASE 2 : 60 UNITS (SOUTH)
 PHASE 3 : 67 UNITS (NORTH)

ACCESSIBLE PARKING SPACES

MAIN STREET NORTH
 TOTAL SURFACE SPACES = 72
 ACCESSIBLE SPACES PER 2010 ADA (208.2.3 RESIDENTIAL FACILITIES)
 TOTAL REQUIRED: MINIMUM 2% OF THE TOTAL SURFACE SPACES
 TOTAL REQUIRED: 2

MAIN STREET SOUTH
 TOTAL SURFACE SPACES = 134
 ACCESSIBLE SPACES PER 2010 ADA (208.2.3 RESIDENTIAL FACILITIES)
 TOTAL REQUIRED: MINIMUM 2% OF THE TOTAL SURFACE SPACES
 TOTAL REQUIRED: 3

Density Calculations

SECTION 4.82.2.A
 AREA OF PARCEL = 17.69 AC. = 770,576 S.F.
 PERMITTED NUMBER OF ROOMS = 642 ROOMS

SECTION 4.82.2.B
 CITY COUNCIL CAN APPROVE AN INCREASE IN THE NUMBER OF ROOMS SUBJECT TO CONDITIONS IN SECTION 4.82.2.B
 MAXIMUM ALLOWABLE INCREASE:
 642 ROOMS x 2 = 1,284 ROOMS
 APPLICANT REQUESTS CITY COUNCIL TO INCREASE THE MAXIMUM ALLOWABLE ROOM COUNT FROM 642 ROOMS TO 960 ROOMS, A 49.5% INCREASE.

- NOTES AND PROPOSED IMPROVEMENTS:**
- TRASH TO BE PICKED UP BY CURBSIDE PICK UP.
 - MUNICIPAL SEWER TO BE PROVIDED BY CONNECTING TO VARIOUS EXISTING SANITARY MANHOLES AS SHOWN ON THE PLAN.
 - MUNICIPAL WATER TO BE PROVIDED BY CONNECTING TO VARIOUS EXISTING WATER MAINS AS SHOWN ON THE PLAN.
 - STORM WATER DETENTION SHALL BE PROVIDED ON SITE IN EXISTING MAIN STREET REGIONAL DETENTION BASIN.
 - 5' WIDE CONCRETE SIDEWALKS SHALL BE CONSTRUCTED ON BOTH SIDES OF SOME INTERIOR ROADS AS SHOWN. ALSO A 6' WIDE CONC. WALKWAY SHALL BE CONSTRUCTED ALONG MAIN STREET AND TRANS-X DRIVE. ALL SIDEWALK STUBS SHALL BE PROVIDED WITH A.D.A. COMPLIANT RAMPS AND DETECTABLE WARNING SURFACES.
 - ALL ROADWAYS TO BE PRIVATE.
 - A CITY OF NOV RIGHT-OF-WAY PERMIT IS REQUIRED FOR WORK WITHIN ANY PUBLIC ROAD RIGHT-OF-WAY.
 - ALL SIDEWALKS AND SIDEWALK RAMPS SHALL A.D.A. COMPLIANT.
 - ALL WORK SHALL CONFORM TO THE CURRENT CITY OF NOV STANDARDS AND SPECIFICATIONS.
 - THE SITE IS LOCATED WITHIN FLOOD ZONE "AREA OF MINIMAL FLOOD HAZARD" ON THE FLOOD MAP OF THE CITY OF NOV, EFFECTIVE 9/29/2006.
 - ALL PROPOSED MARKINGS, TRAFFIC CONTROL SIGNS, AND PARKING SIGNS SHALL COMPLY WITH THE DESIGN AND PLACEMENT REQUIREMENTS OF THE 2011 MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. ALL ROADWAY SIGNS SHOULD BE INSTALLED TWO FEET FROM THE FACE OF CURB OR EDGE OF SIDEWALK TO THE NEAR EDGE OF THE SIGN.
 - PROP. WATER MAIN AND PROP. SANITARY SEWER TO BE CENTERLINE OF 20' WIDE PUBLIC EASEMENT.
 - A PARCEL COMBINATION WILL BE REQUIRED FOR PARCELS # 22-23-151-039 AND # 22-23-151-013.
 - BUILDINGS 8 THRU 16 REQUIRE ALL MASONRY ELEVATIONS. ALL OTHER BUILDINGS CAN BE THE BASE ELEVATION.
 - ALL ON-SITE EXISTING POWER POLES AND OVERHEAD WIRES SHOULD BE RELOCATED AND/OR REMOVED.
 - A PROPERTY COMBINATION WILL BE PROVIDED FOR ASSESSING WITH THE FINAL CONSTRUCTION DOCUMENTS. A CONDOMINIUM WILL BE RECORDED OVER ALL OF THE PARCELS WITH NO REMAINDER PARCELS.
 - ALL SIDEWALKS ARE 5' WIDE. ALL PATHWAYS FROM FRONT PORCH TO SIDEWALK ARE 5' WIDE. ALSO 6' OF SIDEWALK WIDTH HAS BEEN PROVIDED IN FRONT OF THE BIKE RACKS.
 - ALL PROPOSED IMPROVEMENTS SHOWN ON THIS PLAN ARE PROPOSED AND WILL BE CONSTRUCTED BY THE MAIN STREET TOWNES DEVELOPER INCLUDING THE ON-SITE IMPROVEMENTS LOCATED BEHIND THE EXISTING BUSINESSES FRONTING NOW ROAD, THE WORK WITHIN THE SIXTH GATE ROAD RIGHT-OF-WAY AND THE WORK WITHIN THE EXISTING CITY OF NOV PARKING LOT.
 - COMPACTED SAND BACKFILL WILL BE PROVIDED FOR ALL UTILITIES WITHIN THE INFLUENCE OF PAVED AREAS.
 - SEE SHEET 4 FOR THE SANITARY SEWER AND WATER MAIN BASIS OF DESIGN.
 - A 3' BUFFER DISTANCE SHALL BE PROVIDED BETWEEN THE SIDEWALK AND ANY FIXED OBJECTS.
 - THE CITY OF NOV HAS NO RESPONSIBILITY TO IMPROVE OR MAINTAIN THE PRIVATE STREETS CONTAINED WITHIN OR PRIVATE STREETS PROVIDING ACCESS TO THE PROPERTY DESCRIBED IN THIS PLAN.
 - DEWATERING IS NOT ANTICIPATED FOR THIS PROJECT. IF DEWATERING IS REQUIRED, A DEWATERING PLAN MUST BE SUBMITTED TO NOV FOR APPROVAL.
 - THE APPLICANT INTENDS TO CONSTRUCT A MIN. 0.61 ACRE WETLAND MITIGATION AREA OFF-SITE BUT WITHIN THE CITY LIMITS OF NOV TO MITIGATE FOR 0.406 ACRE OF WETLAND FILL. THIS MITIGATION AREA IS SIZED AT A 1.5 TO 1 MITIGATION TO WETLAND FILL RATIO. THE APPLICANT IS CONSIDERING TWO SITES WITHIN THE CITY LIMITS ON SINGH OWNED PROPERTIES.

BARRIER-FREE RESERVED PARKING SIGNS
 NOTE: ACCESSIBLE PARKING SPACE SIGNS SHALL HAVE A MIN. HEIGHT AND SIZE TO PERMIT THE SPACE TO BE EASILY IDENTIFIED AND ARE ELEVATED SUCH THAT THEY SHALL NOT PRESENT A HAZARD TO PERSONS WALKING NEAR THE SIGN.

STRIPING NOTES:

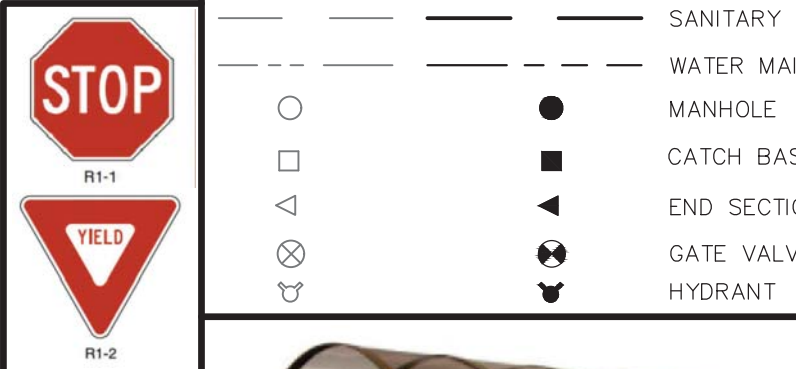
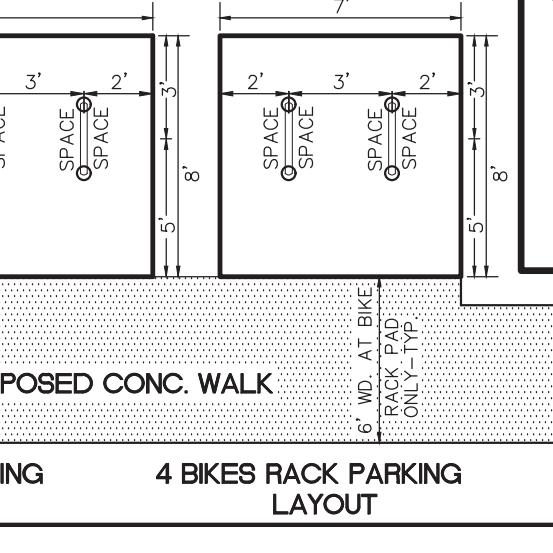
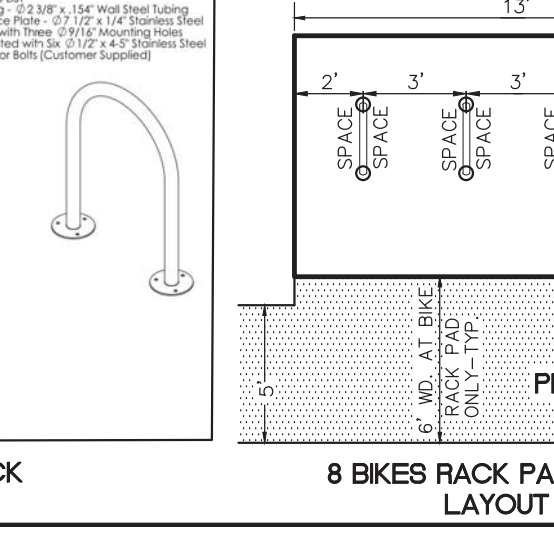
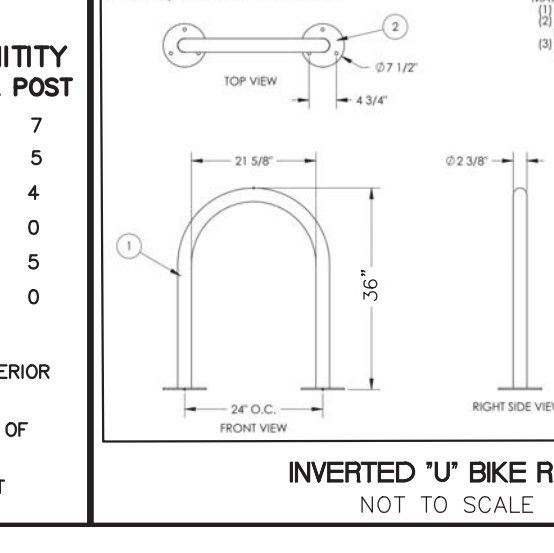
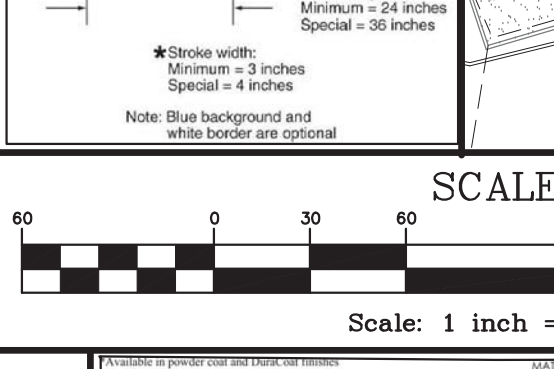
- PARKING LOTS SHALL HAVE PARKING AREAS AND RAMP PAVEMENT MARKINGS MARKED BY PAINTED 4-INCH WIDE LINES ACCURATELY AND NEATLY ARRANGED AS INDICATED ON THE PLAN. LINES SHALL BE PAINTED WITH AN APPROVED WHITE TRAFFIC PAINT COMPATIBLE WITH BITUMINOUS CONCRETE SURFACES SUCH AS SHERWIN WILLIAMS NO. B2 9W; PPG TYPE 11-3 OR 11-4, OR AS APPROVED BY THE OWNER. PROTECT ALL PAINTED AREAS UNTIL PAINT IS COMPLETELY DRY. PARKING AREAS FOR THE PHYSICALLY HANDICAPPED SHALL BE PAINTED WITH BLUE PAINT FOR STRIPING. WHEEL CHAIR SYMBOL SHALL BE PROVIDED IN TWO COATS.
- THE INTERNATIONAL SYMBOL FOR ACCESSIBILITY SHALL BE WHITE OR WHITE WITH BLUE BACKGROUND.
- WHEN A BARRIER FREE PARKING SPACE IS ADJACENT TO A STANDARD PARKING SPACE, BLUE AND WHITE LINES ADJUTING EACH OTHER SHALL BE PROVIDED.

SIGN QUANTITIES

SYMBOL	DESCRIPTION	QUANTITY	PANEL POST
R1-1	30" "STOP" SIGN W/ STREET SIGN	7	7
R1-2	30" "YIELD" SIGN W/ STREET SIGN	5	5
R2-(2S)	75 MPH SPEED LIMIT SIGN	4	4
12"	D3-1 STREET NAME ATOP "STOP" SIGN	6	0
V.A.	BARRIER SIGN (R7-8)	5	5
V.A.	ACCESSIBLE SIGN (R7-8P)	4	0

SIGNAGE NOTES

- STREET NAME SIGNS SHOULD BE PLACED A TOP THE INTERIOR YIELD SIGNS AND THE EXISTING STOP SIGNS.
- ALL STREET-NAME SIGNS SHALL COMPLY WITH THE CITY OF NOV DESIGN STANDARDS.
- ALL TRAFFIC SIGNAGE SHALL COMPLY WITH THE CURRENT MUTUO STANDARDS.



THE TOWNES AT MAIN STREET
 SECTION 23, TOWN 1 NORTH, RANGE 8 EAST
 CITY OF NOV, OAKLAND COUNTY, MICHIGAN

REVISIONS

NO.	ITEM	DATE
1.	REV. PER CITY OF NOV REVIEW	11-15-21
2.	REV. PER CITY OF NOV REVIEW	3-6-22

UTILITY WARNING
 UNDERGROUND UTILITY LOCATIONS AS SHOWN ON THE PLAN, WERE OBTAINED FROM UTILITY OWNER AND NOT FIELD LOCATED.

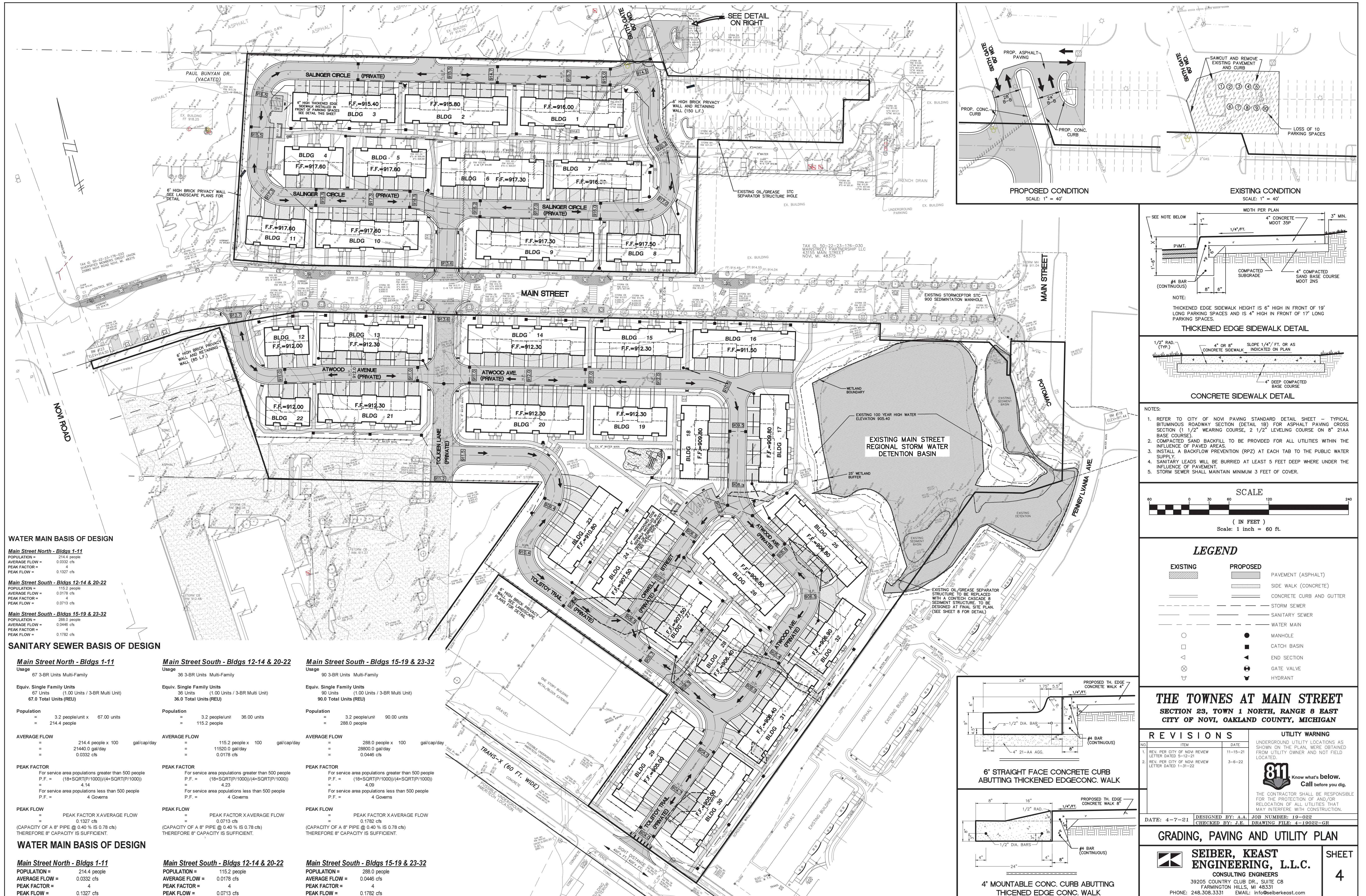
811 Know what's below. Call before you dig.

DATE: 4-7-21 DESIGNED BY: A.A. JOB NUMBER: 19-022
 CHECKED BY: J.E. DRAWING FILE: 3-19022-0A

OVERALL SITE PLAN

SEIBER, KEAST ENGINEERING, L.L.C.
 CONSULTING ENGINEERS
 39205 UNION CLUB DR., SUITE C8
 FARMINGTON HILLS, MI 48331
 PHONE: 248.308.3331 EMAIL: info@seiberkeast.com

SHEET 3



WATER MAIN BASIS OF DESIGN

Main Street North - Bldgs 1-11
 POPULATION = 214.4 people
 AVERAGE FLOW = 0.032 cfs
 PEAK FACTOR = 4
 PEAK FLOW = 0.1327 cfs

Main Street South - Bldgs 12-14 & 20-22
 POPULATION = 115.2 people
 AVERAGE FLOW = 0.0178 cfs
 PEAK FACTOR = 4
 PEAK FLOW = 0.0713 cfs

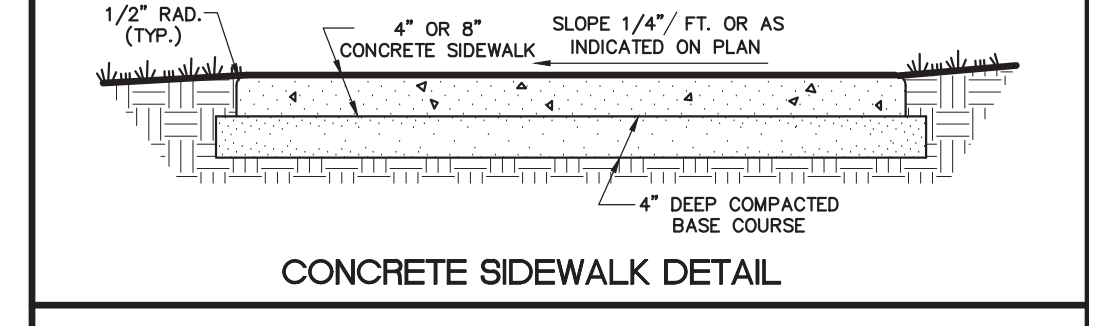
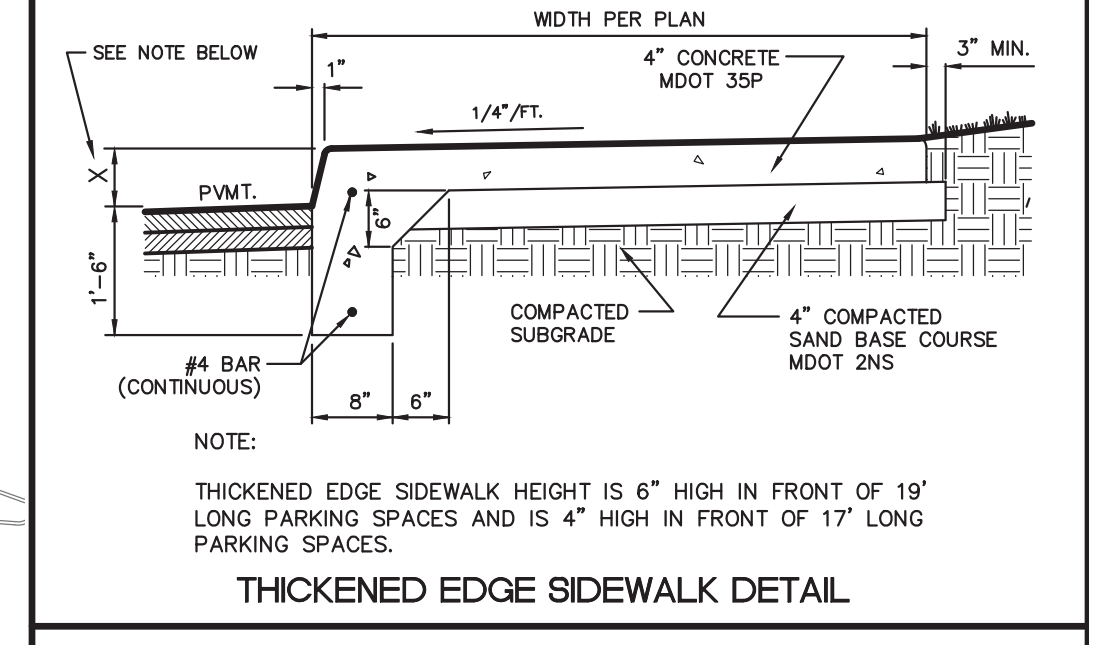
Main Street South - Bldgs 15-19 & 23-32
 POPULATION = 288.0 people
 AVERAGE FLOW = 0.0446 cfs
 PEAK FACTOR = 4
 PEAK FLOW = 0.1782 cfs

SANITARY SEWER BASIS OF DESIGN

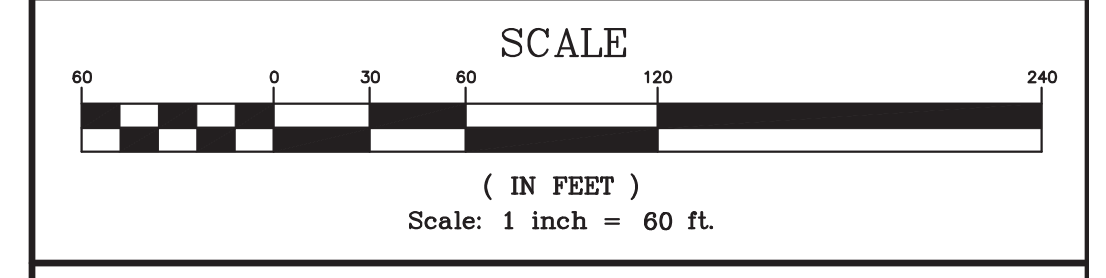
Main Street North - Bldgs 1-11		Main Street South - Bldgs 12-14 & 20-22		Main Street South - Bldgs 15-19 & 23-32	
Usage 67 3-BR Units Multi-Family		Usage 36 3-BR Units Multi-Family		Usage 90 3-BR Units Multi-Family	
Equiv. Single Family Units 67 Units (1.00 Units / 3-BR Multi Unit) 67.0 Total Units (REU)		Equiv. Single Family Units 36 Units (1.00 Units / 3-BR Multi Unit) 36.0 Total Units (REU)		Equiv. Single Family Units 90 Units (1.00 Units / 3-BR Multi Unit) 90.0 Total Units (REU)	
Population = 3.2 people/unit x 67.00 units = 214.4 people		Population = 3.2 people/unit x 36.00 units = 115.2 people		Population = 3.2 people/unit x 90.00 units = 288.0 people	
AVERAGE FLOW = 214.4 people x 100 gal/cap/day = 21440.0 gal/day = 0.032 cfs		AVERAGE FLOW = 115.2 people x 100 gal/cap/day = 11520.0 gal/day = 0.0178 cfs		AVERAGE FLOW = 288.0 people x 100 gal/cap/day = 28800.0 gal/day = 0.0446 cfs	
PEAK FACTOR = 4 For service area populations greater than 500 people P.F. = (19+SQRT(P/1000))/(4+SQRT(P/1000)) = 4.14 For service area populations less than 500 people P.F. = 4 Govers		PEAK FACTOR = 4 For service area populations greater than 500 people P.F. = (19+SQRT(P/1000))/(4+SQRT(P/1000)) = 4.23 For service area populations less than 500 people P.F. = 4 Govers		PEAK FACTOR = 4 For service area populations greater than 500 people P.F. = (19+SQRT(P/1000))/(4+SQRT(P/1000)) = 4.09 For service area populations less than 500 people P.F. = 4 Govers	
PEAK FLOW = PEAK FACTOR X AVERAGE FLOW = 0.1327 cfs (CAPACITY OF A 8" PIPE @ 0.40 % IS 0.78 cfs) THEREFORE 8" CAPACITY IS SUFFICIENT.		PEAK FLOW = PEAK FACTOR X AVERAGE FLOW = 0.0713 cfs (CAPACITY OF A 8" PIPE @ 0.40 % IS 0.78 cfs) THEREFORE 8" CAPACITY IS SUFFICIENT.		PEAK FLOW = PEAK FACTOR X AVERAGE FLOW = 0.1782 cfs (CAPACITY OF A 8" PIPE @ 0.40 % IS 0.78 cfs) THEREFORE 8" CAPACITY IS SUFFICIENT.	

WATER MAIN BASIS OF DESIGN

Main Street North - Bldgs 1-11		Main Street South - Bldgs 12-14 & 20-22		Main Street South - Bldgs 15-19 & 23-32	
POPULATION = 214.4 people		POPULATION = 115.2 people		POPULATION = 288.0 people	
AVERAGE FLOW = 0.032 cfs		AVERAGE FLOW = 0.0178 cfs		AVERAGE FLOW = 0.0446 cfs	
PEAK FACTOR = 4		PEAK FACTOR = 4		PEAK FACTOR = 4	
PEAK FLOW = 0.1327 cfs		PEAK FLOW = 0.0713 cfs		PEAK FLOW = 0.1782 cfs	



- NOTES:**
- REFER TO CITY OF NOVI PAVING STANDARD DETAIL SHEET - TYPICAL BITUMINOUS ROADWAY SECTION (DETAIL 1B) FOR ASPHALT PAVING CROSS SECTION (1 1/2" WEARING COURSE, 2 1/2" LEVELING COURSE ON 8" 21AA BASE COURSE).
 - COMPACTED SAND BACKFILL TO BE PROVIDED FOR ALL UTILITIES WITHIN THE INFLUENCE OF PAVED AREAS.
 - INSTALL A BACKFLOW PREVENTION (RP2) AT EACH TAP TO THE PUBLIC WATER SUPPLY.
 - SANITARY LEADS WILL BE BURIED AT LEAST 5 FEET DEEP WHERE UNDER THE INFLUENCE OF PAVEMENT.
 - STORM SEWER SHALL MAINTAIN MINIMUM 3 FEET OF COVER.



LEGEND

EXISTING	PROPOSED	DESCRIPTION
[Hatched Box]	[Solid Box]	PAVEMENT (ASPHALT)
[Dashed Box]	[Solid Box]	SIDE WALK (CONCRETE)
[Dashed Box]	[Solid Box]	CONCRETE CURB AND GUTTER
[Dashed Line]	[Solid Line]	STORM SEWER
[Dashed Line]	[Solid Line]	SANITARY SEWER
[Dashed Line]	[Solid Line]	WATER MAIN
[Circle]	[Circle]	MANHOLE
[Square]	[Square]	CATCH BASIN
[Triangle]	[Triangle]	END SECTION
[Circle with Arrow]	[Circle with Arrow]	GATE VALVE
[Circle with T]	[Circle with T]	HYDRANT

THE TOWNES AT MAIN STREET
 SECTION 23, TOWN 1 NORTH, RANGE 8 EAST
 CITY OF NOVI, OAKLAND COUNTY, MICHIGAN

REVISIONS

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UTILITY WARNING

UNDERGROUND UTILITY LOCATIONS AS SHOWN ON THE PLAN, WERE OBTAINED FROM UTILITY OWNER AND NOT FIELD LOCATED.

811 Know what's below. Call before you dig.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF AND/OR RELOCATION OF ALL UTILITIES THAT MAY INTERFERE WITH CONSTRUCTION.

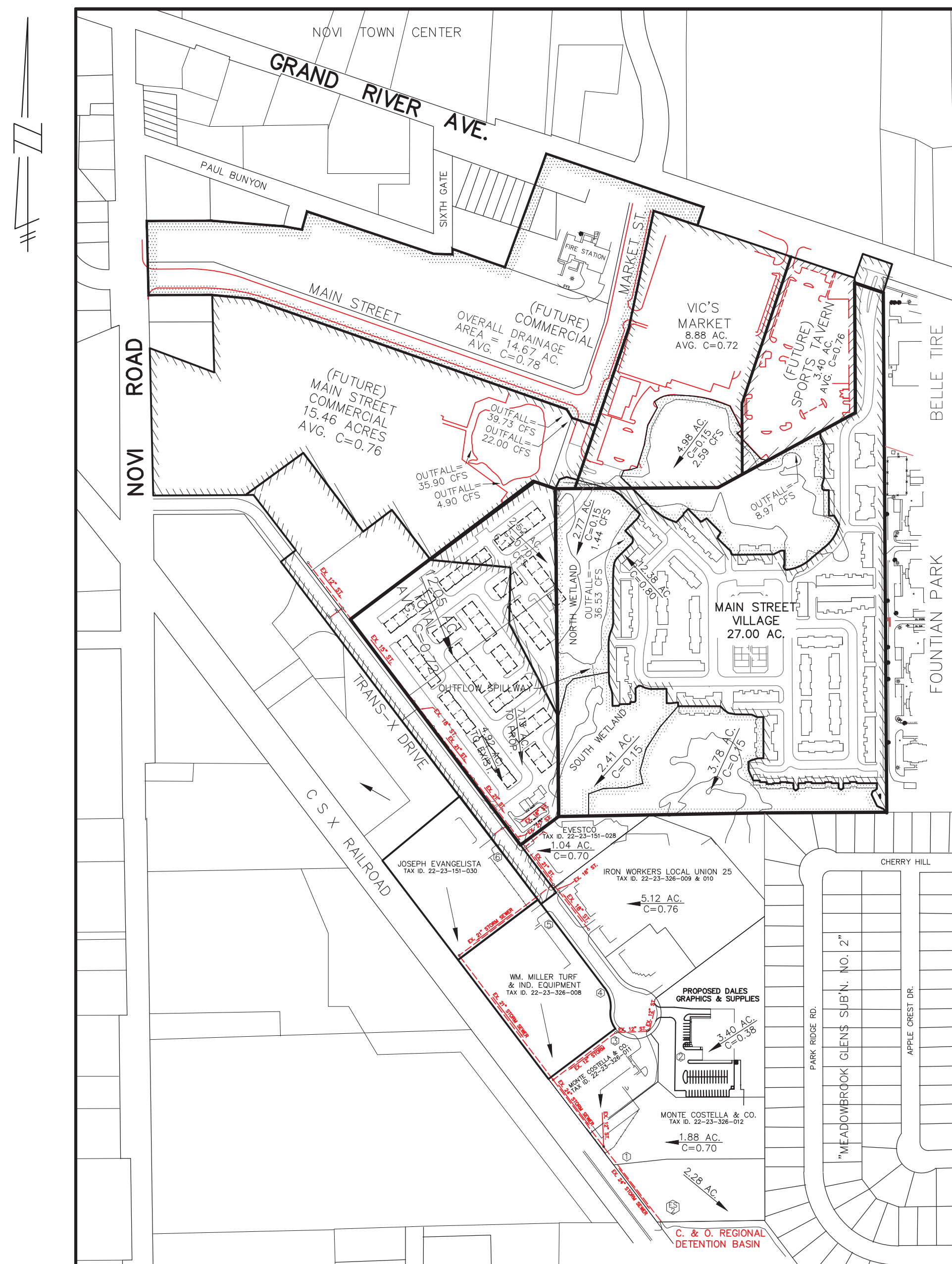
DATE: 4-7-21 DESIGNED BY: A.A. JOB NUMBER: 19-022
 CHECKED BY: J.E. DRAWING FILE: 4-19022-GR

SEIBER, KEAST ENGINEERING, L.L.C.
 CONSULTING ENGINEERS
 39205 COUNTRY CLUB DR., SUITE C8
 FARMINGTON HILLS, MI 48331
 PHONE: 248.308.3331 EMAIL: info@seiberkeast.com

GRADING, PAVING AND UTILITY PLAN

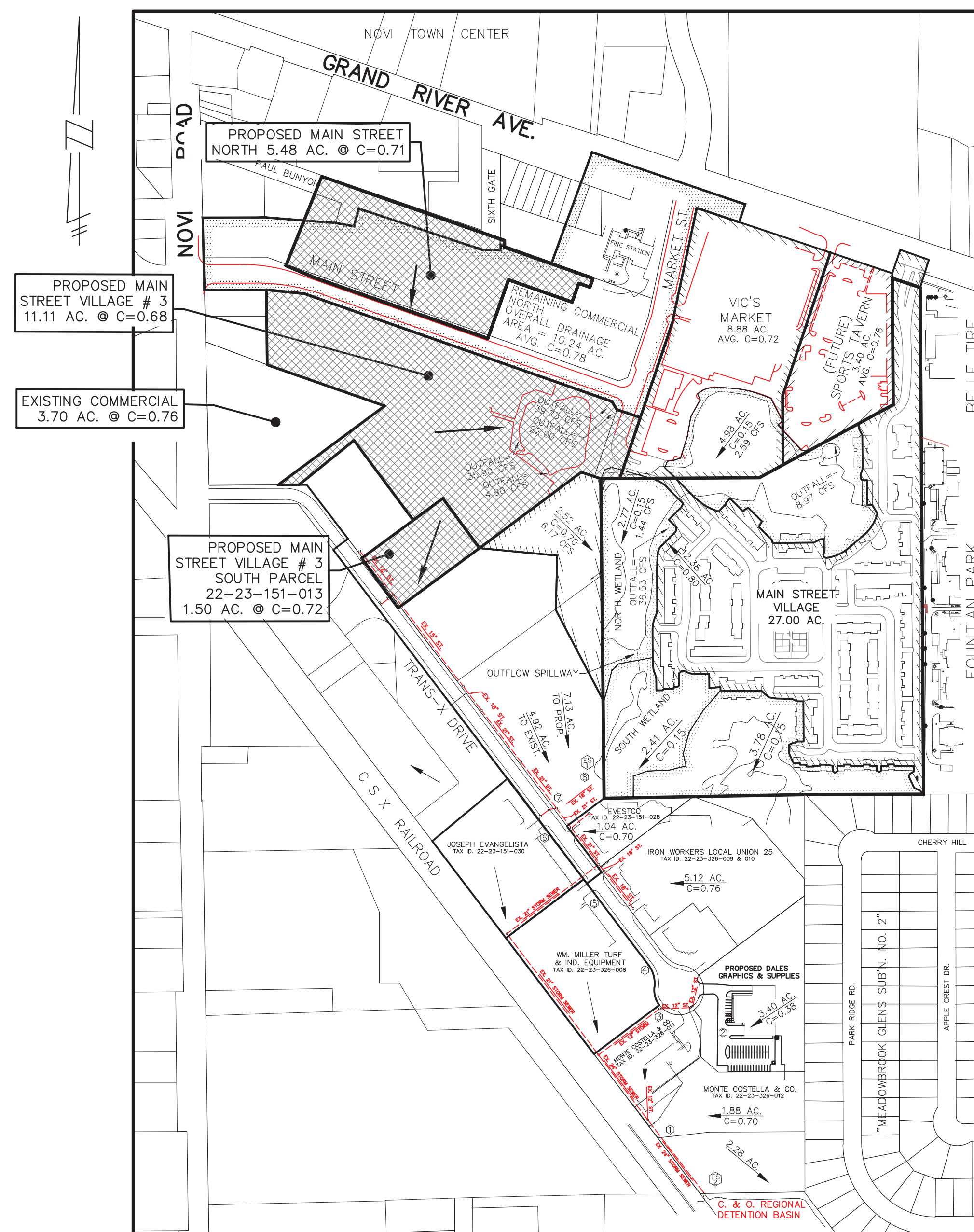
SHEET 4

EXISTING MAIN STREET STORM WATER MANAGEMENT PLAN



NOT TO SCALE

PROPOSED MAIN STREET VILLAGE # 3 STORM WATER MANAGEMENT PLAN



NOT TO SCALE

Run-off Coefficient Comparison

Comparison of the Existing / Previously Approved Main Street Regional Detention Basin Run-off Coefficients to the Proposed Run-off Coefficients for the Proposed Development.

Notes:

- The existing run-off coefficient for the Main Street Regional Detention Basin was Master Planned as part of the "Main Street Village Off-Site Storm Sewer Improvement Plan" prepared by Seiber, Keast & Associates (Job Number 94-041) Plan Set Dated March 26, 1996 as revised May 23, 1996. This Storm Water Management Master Plan was approved by the City of Novi and constructed in accordance with the Engineering Plan Set.
- The proposed run-off coefficients provided in the table below are based on the current "Engineering Design Manual for City of Novi, Oakland County, Michigan" as updated December 23, 2014.

Table 1. MAIN STREET NORTH - PARCEL 22-23-176-035 - Run-off Coefficient Comparison

Existing / Approved Runoff Coefficient = 0.78

Proposed Run-off Coefficient Calculation			
TRIBUTARY AREA =	5.48 AC		
Impervious Areas			
Pavement =	1.91 Ac.		
Buildings =	1.38 Ac.		
	3.27 Ac.	at C =	0.95
Pervious Areas			
Lawn Areas =	2.21 Ac.	at C =	0.35
C Avg. =	0.71		

The proposed run-off coefficient is equal to or less than the previous City of Novi approved run-off co-efficient for the development area.

Table 2. MAIN STREET SOUTH - PARCEL 22-23-151-039 - Run-off Coefficient Comparison

Existing / Approved Runoff Coefficient = 0.76

Proposed Run-off Coefficient Calculation			
TRIBUTARY AREA =	11.11 AC		
Impervious Areas			
Pavement =	1.53 Ac.		
Buildings & Walks =	2.99 Ac.		
	4.52 Ac.	at C =	0.95
Wetland & Detention =	1.55 Ac.	at C =	1.00
Pervious Areas			
Lawn Areas =	5.04 Ac.	at C =	0.35
C Avg. =	0.68		

The proposed run-off coefficient is equal to or less than the previous City of Novi approved run-off co-efficient for the development area.

Table 3. MAIN STREET SOUTH - PARCEL 22-23-151-013 - Run-off Coefficient Comparison

Existing / Approved Runoff Coefficient = 0.72

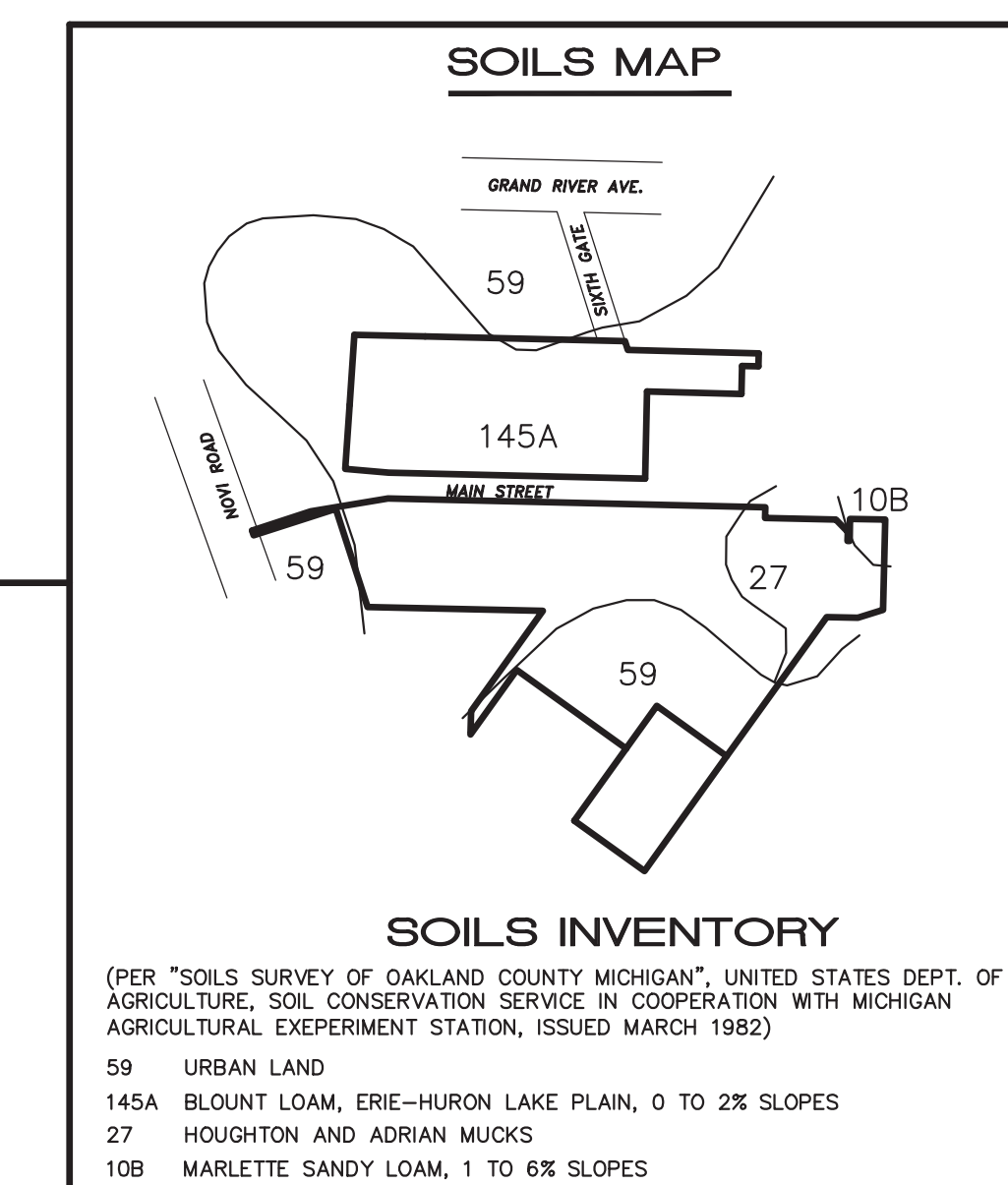
Proposed Run-off Coefficient Calculation			
TRIBUTARY AREA =	1.50 AC		
Impervious Areas			
Pavement =	0.25 Ac.		
Buildings =	0.67 Ac.		
	0.92 Ac.	at C =	0.95
Pervious Areas			
Lawn Areas =	0.58 Ac.	at C =	0.35
C Avg. =	0.72		

The proposed run-off coefficient is equal to or less than the previous City of Novi approved run-off co-efficient for the development area.

The proposed run-off coefficients for all of the development areas are based on the current City of Novi Engineering Standards and all of the proposed run-off coefficients are less than the previous City of Novi approved Master Planned run-off coefficients for the Main Street Regional Detention Basin.

NOTES:

- STORM WATER GENERATED ON SITE SHALL BE COLLECTED AND DELIVERED TO THE EXISTING MAIN STREET NOVI REGIONAL STORM WATER MANAGEMENT SYSTEM. NET IMPERVIOUS AREA WILL NOT BE INCREASED AND RUN-OFF COEFFICIENTS WILL BE LESS THAN OR EQUAL TO PREVIOUSLY APPROVED RUN-OFF COEFFICIENTS, THEREFORE NO MODIFICATIONS TO THE DETENTION BASIN ARE REQUIRED. (REF: APPROVED MAIN STREET VILLAGE OFFSITE STORM SEWER IMPROVEMENT PLAN SKA JOB# 94-041 - (REV. 5/23/96)).
- PROPOSED CATCH BASINS SHALL HAVE 2' SUMPS.
- STORM SEWER PROFILE SHALL BE PROVIDED AT FINAL SITE PLAN.



THE TOWNES AT MAIN STREET

SECTION 23, TOWN 1 NORTH, RANGE 8 EAST
CITY OF NOVI, OAKLAND COUNTY, MICHIGAN

REVISIONS

NO.	ITEM	DATE
1.	REV. PER CITY OF NOVI REVIEW LETTER DATED 5-12-21	11-15-21

UTILITY WARNING

UNDERGROUND UTILITY LOCATIONS AS SHOWN ON THE PLAN, WERE OBTAINED FROM UTILITY OWNER AND NOT FIELD LOCATED.



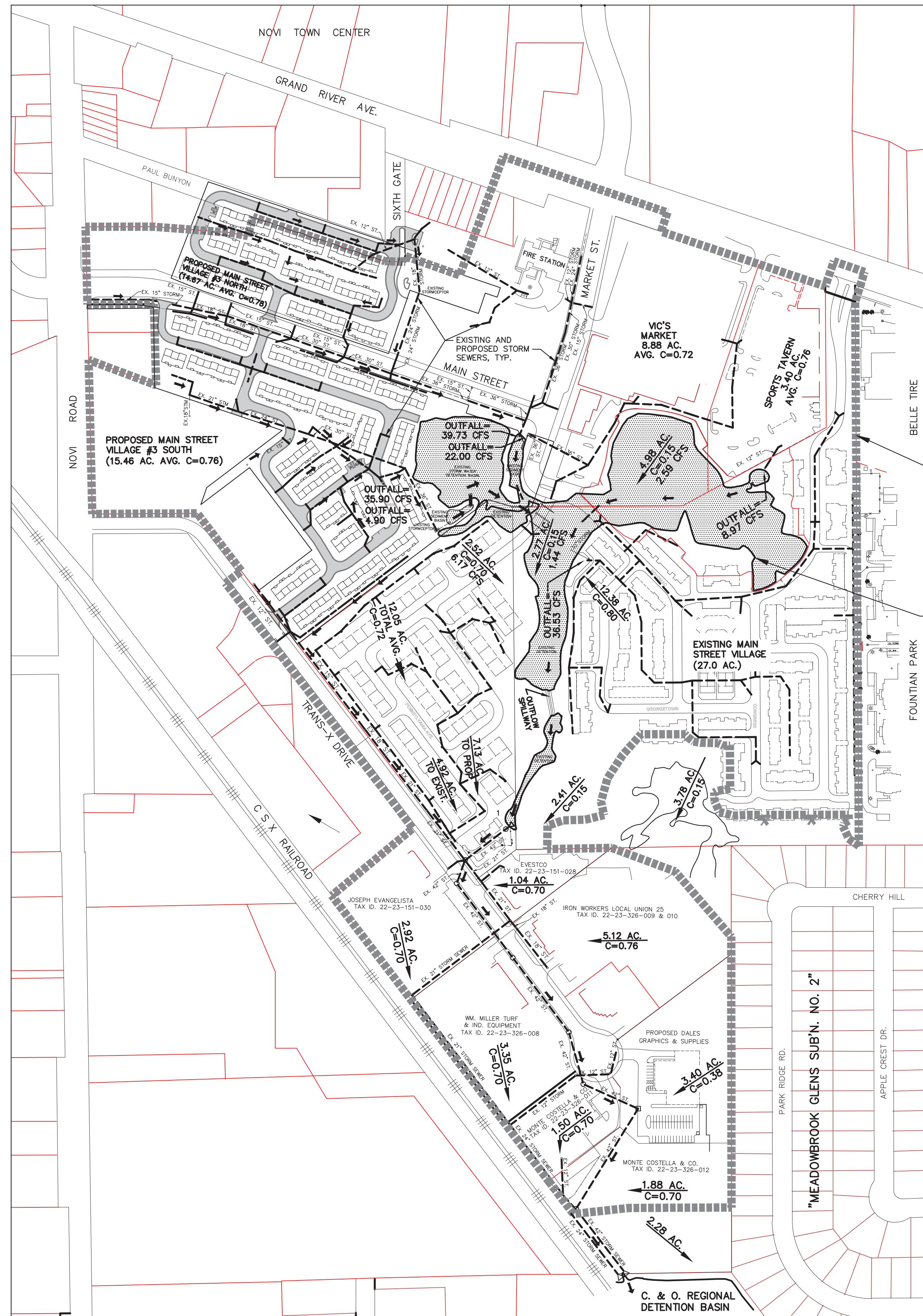
THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF AND/OR RELOCATION OF ALL UTILITIES THAT MAY INTERFERE WITH CONSTRUCTION.

DATE: 4-7-21 DESIGNED BY: A.A. JOB NUMBER: 19-022
CHECKED BY: J.E. DRAWING FILE: 5-19022-SWM

STORM WATER MANAGEMENT PLAN

SEIBER, KEAST ENGINEERING, L.L.C.
CONSULTING ENGINEERS
39205 COUNTRY CLUB DR., SUITE C8
FARMINGTON HILLS, MI 48331
PHONE: 248.308.3331 EMAIL: info@seiberkeast.com

SHEET
5



MAIN STREET VILLAGE REGIONAL DETENTION BASIN NARRATIVE

THE MAIN STREET VILLAGE REGIONAL DETENTION BASIN WAS DESIGNED TO DETAIN THE 100-YEAR STORM EVENT AS PART OF THE "MAIN STREET VILLAGE OFF-SITE STORM SEWER IMPROVEMENT PLAN" DESIGNED BY SEIBER, KEAST & ASSOCIATES (SKA JOB NUMBER 94-041) ENGINEERING PLAN SET DATED MARCH 26, 1996 AS REVISED MAY 23, 1996. THE DETENTION BASIN SERVICES SEVERAL AREAS (BOTH PUBLIC AND PRIVATE) INCLUDING:

- "VIC'S MARKET" AND PARKING LOT
 - BETTER HEALTH MARKET BUILDING AND PARKING LOT
 - MICHIGAN BEER COMPANY
- "FUTURE SPORTS TAVERN" AND PARKING LOT
 - MAIN STREET EAST SHOPPING CENTER
 - ONE WORLD MARKET
 - LIBRARY PUB
- "FUTURE MAIN STREET COMMERCIAL NORTH"
 - CITY OF NOVI FIRE STATION (PUBLIC PROJECT)
 - MAIN STREET (THE R.O.W. AND STREET, PUBLIC PROJECT)
 - DIVERSIFIED MEMBERS CREDIT UNION
 - MONGOLIAN BARBEQUE
 - THE PROPOSED TOWNES AT MAIN STREET NORTH
- "FUTURE MAIN STREET COMMERCIAL SOUTH"
 - FORMER 5TH AVENUE BUILDING AND PARKING LOT
 - A PORTION OF THE PROPOSED TOWNES AT MAIN STREET SOUTH
- EXISTING WETLANDS AND DETENTION AREAS
- MAIN STREET VILLAGE 1 AND A PORTION OF MAIN STREET VILLAGE 2.

THE MAIN STREET VILLAGE REGIONAL DETENTION BASIN AND THE TRANS-X DRIVE STORMWATER MANAGEMENT SYSTEM OUTLETS TO THE EXISTING CITY OF NOVI C&O REGIONAL DETENTION BASIN AND THE MIDDLE ROUGE RIVER WALLED LAKE BRANCH.

THE TOWNES AT MAIN STREET
SECTION 23, TOWN 1 NORTH, RANGE 8 EAST
CITY OF NOVI, OAKLAND COUNTY, MICHIGAN

DATE: 4-7-21 DESIGNED BY: A.A. JOB NUMBER: 19-022
CHECKED BY: J.E. DRAWING FILE: 6-19022-OFF

REVISIONS		
NO.	ITEM	DATE
1.	REV. PER CITY OF NOVI REVIEW LETTER DATED 5-12-21	11-15-21
2.	REV. PER CITY OF NOVI REVIEW LETTER DATED 1-31-22	3-6-22

MAIN STREET VILLAGE REGIONAL STORM WATER MANAGEMENT PLAN

SEIBER, KEAST ENGINEERING, L.L.C.
CONSULTING ENGINEERS

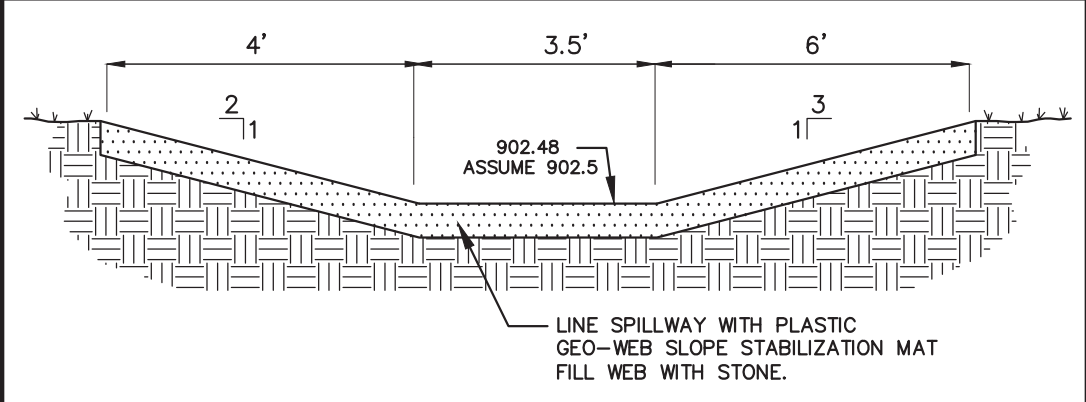
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SHEET
6

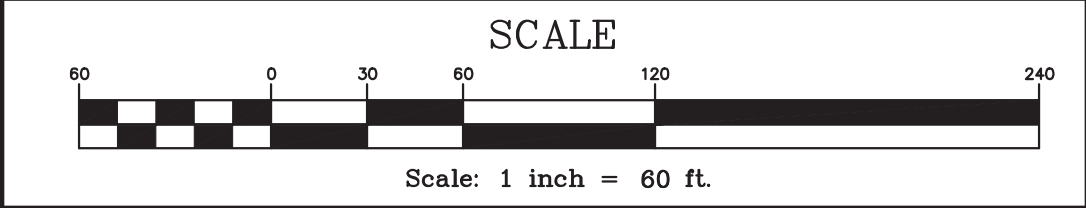


Revised Main Street Regional Basin Areas

ELEVATION City of Novi Datum	NE BASIN (S.F.)	SW BASIN (S.F.)	Total Area (S.F.)
902.5	31,226	67,218	98,444
903.0	46,552	78,912	125,464
903.5	95,883	96,856	192,739
904.0	122,303	114,875	237,178
904.5	134,287	126,959	261,246
905.0	144,450	144,363	288,813
905.5	156,623	154,488	311,111



OVERFLOW SPILLWAY
RESTRICTED OUTLET IS THROUGH TRAPEZOIDAL
WER, L= 35'; SIDE SLOPE = 1:3 AND 1:2
FIELD MEASURED ON 3-7-2022
(NOT TO SCALE)



THE TOWNES AT MAIN STREET
SECTION 23, TOWN 1 NORTH, RANGE 8 EAST
CITY OF NOVI, OAKLAND COUNTY, MICHIGAN

REVISIONS		UTILITY WARNING
NO.	ITEM	DATE
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Call before you dig.

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DATE: 4-7-21 DESIGNED BY: A.A. JOB NUMBER: 19-022
CHECKED BY: J.E. DRAWING FILE: 3-19022-0A

REGIONAL BASIN PLAN

SEIBER, KEAST ENGINEERING, L.L.C.
CONSULTING ENGINEERS
39205 COUNTRY CLUB DR., SUITE C8
FARMINGTON HILLS, MI 48331
PHONE: 248.308.3331 EMAIL: info@seiberkeast.com

SHEET 7

HYDROGRAPH ROUTING ANALYSIS 100 YEAR STORM

HYDROGRAPH ROUTING ANALYSIS - 100 YEAR STORM

MAIN STREET NORTH & SOUTH
REVISED HYDROGRAPH BASED ON THE AS-BUILT POND, THE INCLUSION OF MAIN STREET NORTH & SOUTH, AND
FIELD MEASUREMENTS OF THE AS-BUILT OUTLET WEIR - March 7, 2022

POINT OF OUTFLOW IS SPILLWAY BETWEEN NORTH & SOUTH WETLAND

CALCULATION OF OUTLET WEIR FLOW RATE

Cw =	L =	Z1 =	Z2 =	Rectangular Weir		Z1 Triangle Weir		Z2 Triangle Weir	
				CwL ^{1.5} (3/2)	Q (cfs)	(2/5) CwZ ^{1.5} (2.5)	Q (cfs)	(2/5) CwZ ^{1.5} (2.5)	
3.090	3.5 ft	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		1.000	16.995	10.815	3.708	19.2739	14.5592	2.472	
		1.500	36.899	19.868	10.218	23.7178	25.3071	6.812	
		2.000	65.549	30.589	20.976	26.1246	37.7677	13.984	
		2.500	103.822	42.750	36.643	28.8813	51.5192	24.429	
		3.000	152.533	56.196	57.802	31.1111	66.5173	38.535	

ELEVATION	H1	Q1*	H2	Q2	TOTAL Q	AREA	VOLUME
City of Novi	ft	cfs	ft	cfs	cfs	sq.ft	cu.ft.
902.50	0.00	0.000			0.00	98444	0
903.50	1.000	16.995			17.00	192739	145592
904.00	1.500	36.899			36.90	237178	253071
904.50	2.000	65.549			65.55	261246	377677
905.00	2.500	103.822			103.82	288813	515192
905.50	3.000	152.533			152.53	311111	665173

*Restricted outlet is through a Trapezoidal Weir, L=3.5', One Side slope=1:3; Other Side slope 1:2

Modified Puls Method	ELEV.	Q	STORAGE	S/T+Q/2
	902.50	0.00	0	0.0
	903.50	17.00	145592	493.8
	904.00	36.90	253071	862.0
	904.50	65.55	377677	1291.7
	905.00	103.82	515192	1769.2
	905.50	152.53	665173	2293.5

HYDROLOGY- Rational Method	A= C= t(c)=	65.46 0.67 25.00	acres min	100-Year Storm I=175/(t+25)
----------------------------------	-------------------	------------------------	--------------	--------------------------------

T	I(t)	I(tsum)	LAG (c)	RAINFALL in/hr	RUNOFF in/hr	INFLOW (cfs)	OUTFLOW (cfs)	STORAGE (cu.ft.)	ELEV
0						0.000	0.000	0	902.50
5	0.106	0.106	0.106	0.021	0.932	0.0	137	902.50	
10	0.115	0.220	0.220	0.044	1.941	0.1	556	902.50	
15	0.124	0.345	0.345	0.069	3.037	0.1	1271	902.51	
20	0.136	0.481	0.481	0.096	4.234	0.3	2299	902.52	
25	0.149	0.629	0.629	0.126	5.544	0.4	3661	902.53	
30	0.164	0.793	1.06	0.167	6.954	0.6	5245	902.54	
35	0.181	0.974	1.220	0.219	8.468	0.8	6936	902.55	
40	0.201	1.175	1.345	0.283	10.082	1.0	8753	902.56	
45	0.224	1.399	1.481	0.358	11.806	1.3	10723	902.57	
50	0.253	1.652	1.629	0.442	13.639	1.5	12875	902.59	
55	0.286	1.938	1.793	0.535	15.582	1.8	15246	902.60	
60	0.327	2.265	1.974	0.638	17.635	2.1	17885	902.62	
65	0.377	2.642	2.175	0.752	19.797	2.4	20853	902.64	
70	0.440	3.082	2.399	0.877	22.069	2.8	24227	902.67	
75	0.520	3.602	2.652	1.012	25.549	3.3	28112	902.69	
80	0.624	4.225	2.938	1.157	30.234	3.8	32489	902.72	
85	0.762	4.987	3.265	1.312	36.133	4.4	38032	902.76	
90	0.952	5.939	3.642	1.487	43.146	5.2	44541	902.81	
95	1.222	7.161	4.079	1.682	51.279	6.1	52588	902.86	
100	1.627	8.788	4.578	1.897	60.531	7.3	62813	902.93	
105	2.273	11.061	5.133	2.132	70.914	8.9	76265	903.02	
110	3.395	14.456	5.782	2.387	82.427	11.1	94817	903.15	
115	5.012	20.068	6.537	2.662	95.074	14.3	122205	903.34	
120	7.100	28.068	7.392	2.957	108.861	18.1	159739	903.60	
125	9.762	38.680	8.347	3.272	124.688	22.2	207664	903.88	
130	13.000	51.615	9.392	3.607	142.565	26.7	267000	904.15	
135	16.824	67.045	10.537	3.962	162.502	31.6	338956	904.43	
140	22.236	85.280	11.782	4.337	184.609	37.0	424532	904.72	
145	29.224	106.415	13.137	4.732	208.996	42.9	525738	905.02	
150	37.792	130.550	14.592	5.147	235.773	49.4	644574	905.34	
155	48.040	157.790	16.147	5.582	264.950	56.6	783050	905.69	
160	60.068	188.140	17.802	6.037	296.537	64.5	943266	906.07	
165	73.984	221.624	19.557	6.512	330.534	73.1	1126302	906.48	
170	89.792	258.216	21.412	7.007	367.041	82.4	1334218	906.92	
175	107.500	297.908	23.367	7.522	406.158	92.4	1568905	907.39	
180	127.116	340.600	25.422	8.057	447.885	103.1	1831362	907.89	
185	148.640	386.292	27.577	8.612	492.222	114.5	2123598	908.42	
190	172.072	434.964	29.832	9.187	539.169	126.6	2446615	908.98	
195	207.404	486.556	32.187	9.782	588.726	139.4	2801412	909.57	
200	254.636	541.968	34.642	10.397	640.893	152.9	3188989	910.19	
205	313.768	601.100	37.197	11.032	695.670	167.1	3609346	910.84	
210	384.800	663.932	39.852	11.687	753.057	182.0	4062493	911.52	
215	467.732	730.464	42.607	12.362	813.054	197.6	4548340	912.23	
220	562.564	800.696	45.462	13.057	875.661	213.9	5066887	912.97	
225	670.296	874.528	48.417	13.772	940.888	230.9	5617134	913.74	
230	790.828	951.960	51.472	14.507	1008.735	248.6	6198081	914.53	
235	924.160	1032.992	54.627	15.262	1079.202	267.0	6808728	915.34	
240	1070.292	1117.624	57.882	16.037	1152.289	286.1	7448075	916.17	
245	1229.124	1205.856	61.237	16.832	1228.006	305.9	8115122	917.02	
250	1400.656	1297.688	64.692	17.647	1306.353	326.4	8807869	917.89	
255	1584.888	1393.120	68.247	18.482	1387.340	347.6	9524316	918.78	
260	1781.720	1492.152	71.892	19.337	1470.967	369.5	10263463	919.69	
265	1991.152	1594.784	75.637	20.212	1557.234	392.1	11034210	920.62	
270	2213.184	1701.016	79.472	21.107	1646.141	415.4	11834557	921.57	
275	2447.816	1810.848	83.397	22.022	1737.688	439.4	12662504	922.54	
280	2694.048	1924.280	87.412	22.957	1831.875	464.1	13517051	923.52	
285	2950.880	2041.312	91.517	23.912	1928.702	489.5	14397208	924.51	
290	3218.312	2161.944	95.712	24.887	2028.119	515.6	15301875	925.51	
295	3496.344	2286.176	100.007	25.882	2129.126	542.4	16229052	926.52	
300	3784.976	2414.008	104.392	26.897	2231.723	569.8	17177739	927.54	
305	4084.208	2545.440	108.867	27.932	2335.810	597.9	18146936	928.57	
310	4394.040	2680.472	113.432	28.987	2441.387	626.6	19135643	929.61	
315	4714.472	2819.104	118.087	30.062	2548.454	655.9	20142860	930.66	
320	5045.504	2961.336	122.832	31.157	2657.011	685.8	21167587	931.72	
325	5387.136	3107.168	127.667	32.272	2767.058	716.3	22208824	932.79	
330	5739.368	3256.600	132.592	33.407	2878.595	747.4	23266561	933.86	
335	6092.199	3409.632	137.607	34.562	2991.622	779.1	24339798	934.94	
340	6455.631	3566.264	142.702	35.737	3106.139	811.4	25427535	936.02	
345	6829.663	3726.596	147.877	36.932	3222.146	844.3	26529772	937.11	

MAXIMUM INFLOW =	255.64 cfs
MAXIMUM OUTFLOW =	81.28 cfs
STORAGE VOLUME =	434197 cu.ft.
HIGH WATER ELEV. =	904.71

HYDROGRAPH ROUTING ANALYSIS 10 YEAR STORM

HYDROGRAPH ROUTING ANALYSIS - 10 YEAR STORM

MAIN STREET NORTH & SOUTH
REVISED HYDROGRAPH BASED ON THE AS-BUILT POND, THE INCLUSION OF MAIN STREET NORTH & SOUTH, AND
FIELD MEASUREMENTS OF THE AS-BUILT OUTLET WEIR - MARCH 7, 2022

POINT OF OUTFLOW IS SPILLWAY BETWEEN NORTH & SOUTH WETLAND

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3.090	3.5 ft	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		1.000	16.995	10.815	3.708	19.2739	14.5592	2.472	
		1.500	36.899	19.868	10.218	23.7178	25.3071	6.812	
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- Open Space (Sec. 3.27.1.F)
- Usable Open Space (Sec. 4.82.5)

Open Space Calculations
Sec. 3.27.1.F
 OPEN SPACE REQUIRED = MIN. 15% OF GROSS SITE AREA

(Main Street North)

GROSS SITE AREA	=	5.48 AC.
OPEN SPACE REQUIRED	=	0.82 AC.
OPEN SPACE PROVIDED	=	1.50 AC.

(Main Street South)

GROSS SITE AREA	=	12.20 AC.
OPEN SPACE REQUIRED	=	1.83 AC.
OPEN SPACE PROVIDED	=	3.55 AC.

Usable Open Space Calculations
Sec. 4.82.5

(Main Street North)

TOTAL No. OF RESIDENTIAL UNITS	=	67
USABLE OPEN SPACE REQUIRED	=	200 S.F. PER UNIT = 13,400 S.F. = 0.31 AC.

BUILDING BALCONIES (30 S.F. EACH BALCONY) x 67 = 2,010 S.F. = 0.05 AC.
 BUILDING BALCONIES = 2,010 S.F. = 0.05 AC.
 USABLE PROMENADE AREA = 22,206 S.F. = 0.51 AC.
USABLE OPEN SPACE PROVIDED = 24,216 S.F. = 0.56 AC.

(Main Street South)

TOTAL No. OF RESIDENTIAL UNITS	=	125
USABLE OPEN SPACE REQUIRED	=	200 S.F. PER UNIT = 25,000 S.F. = 0.58 AC.

BUILDING BALCONIES (30 S.F. EACH BALCONY) x 125 = 3,750 S.F. = 0.08 AC.
 BUILDING BALCONIES = 3,750 S.F. = 0.08 AC.
 USABLE PLAYGROUND AREA = 17,431 S.F. = 0.47 AC.
 USABLE OPEN SPACE AREA "A" = 5,891 S.F. = 0.13 AC.
 USABLE OPEN SPACE AREA "B" = 5,223 S.F. = 0.12 AC.
USABLE OPEN SPACE PROVIDED = 32,295 S.F. = 0.74 AC.

THE TOWNES AT MAIN STREET
 SECTION 23, TOWN 1 NORTH, RANGE 8 EAST
 CITY OF NOVI, OAKLAND COUNTY, MICHIGAN

REVISIONS		UTILITY WARNING
NO.	ITEM	DATE
1.	REV. PER CITY OF NOVI REVIEW LETTER DATED 9-12-21	11-15-21
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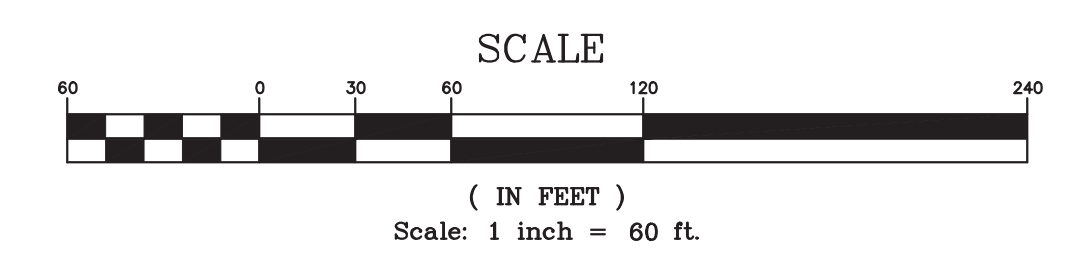
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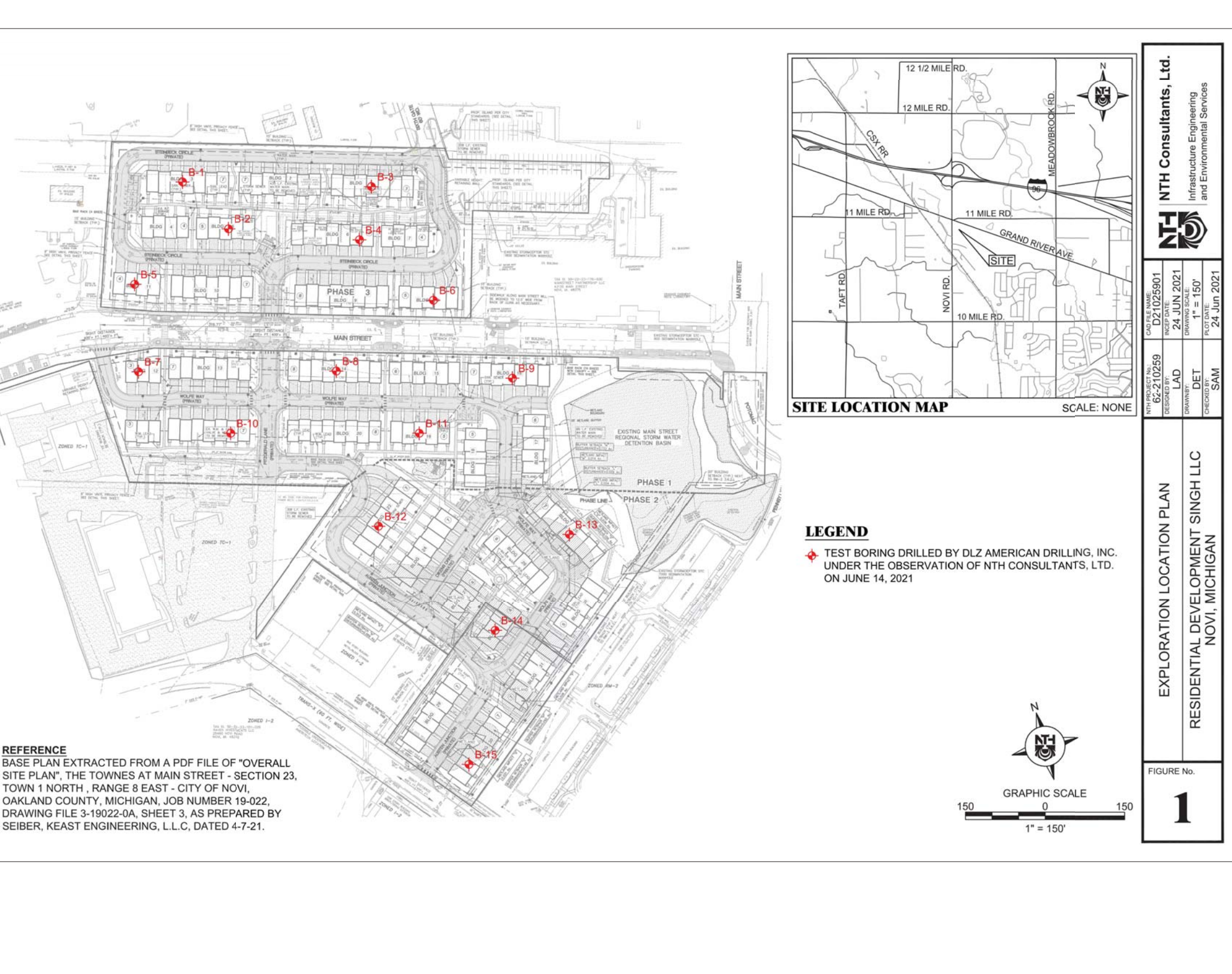
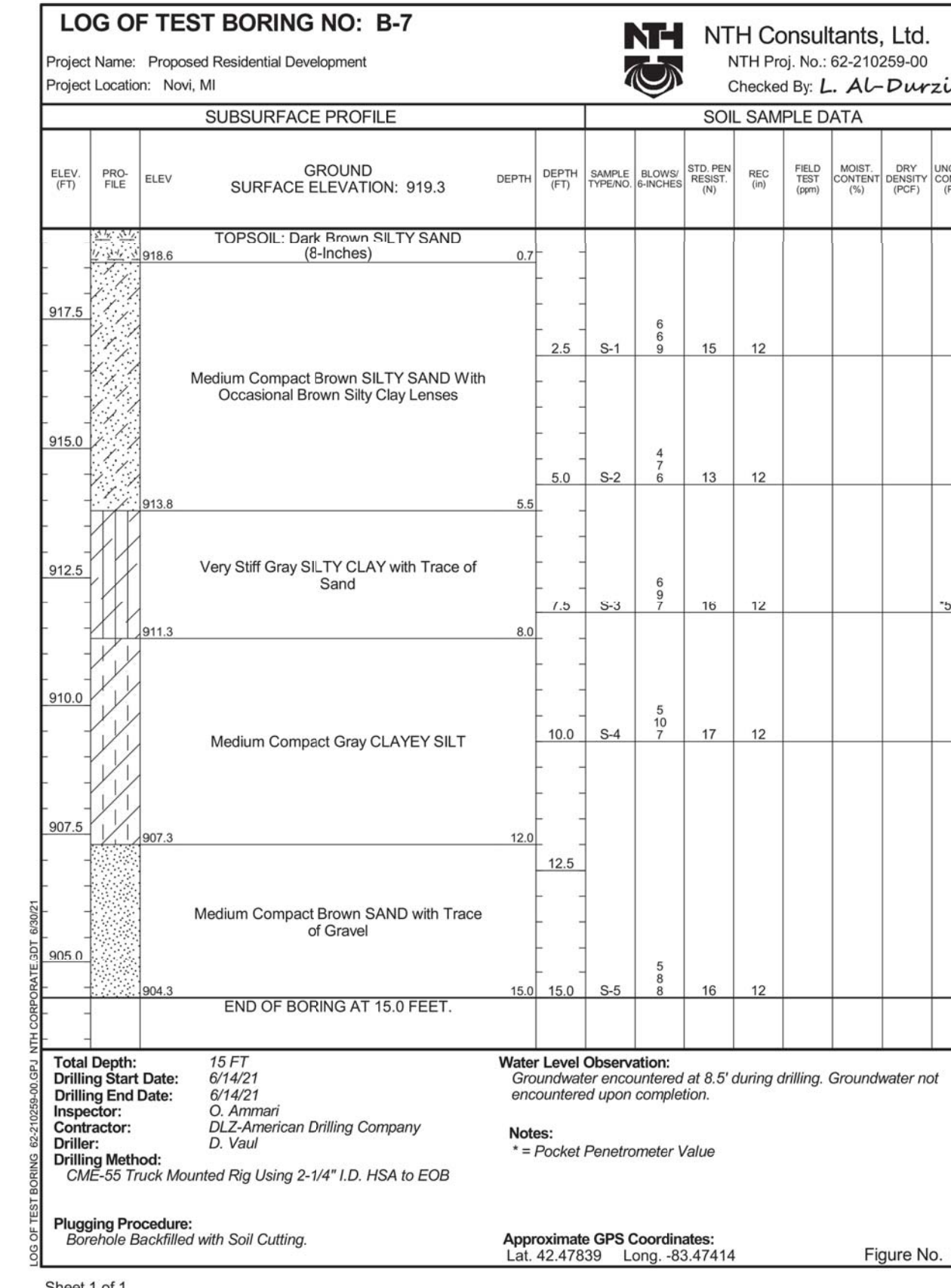
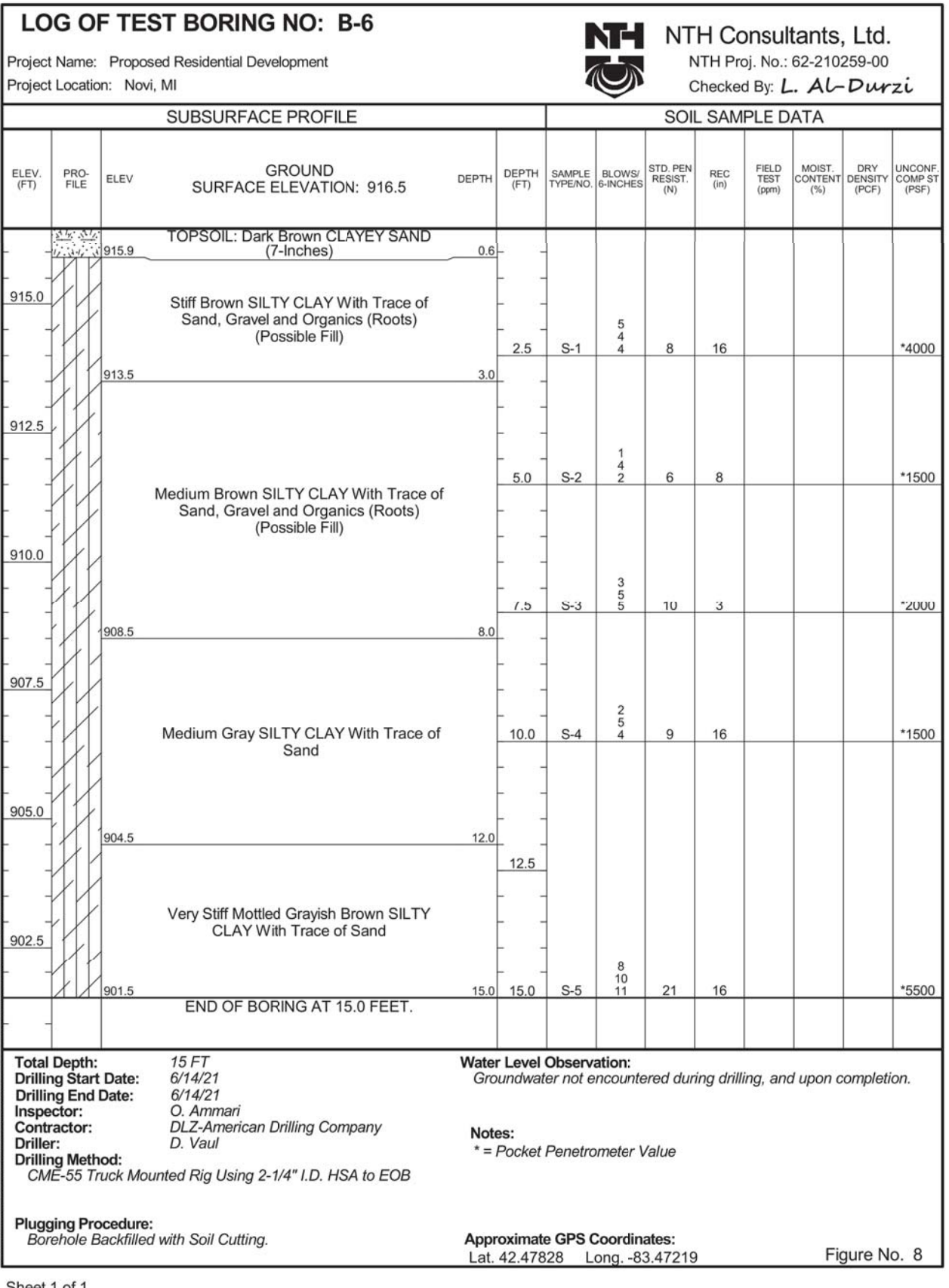
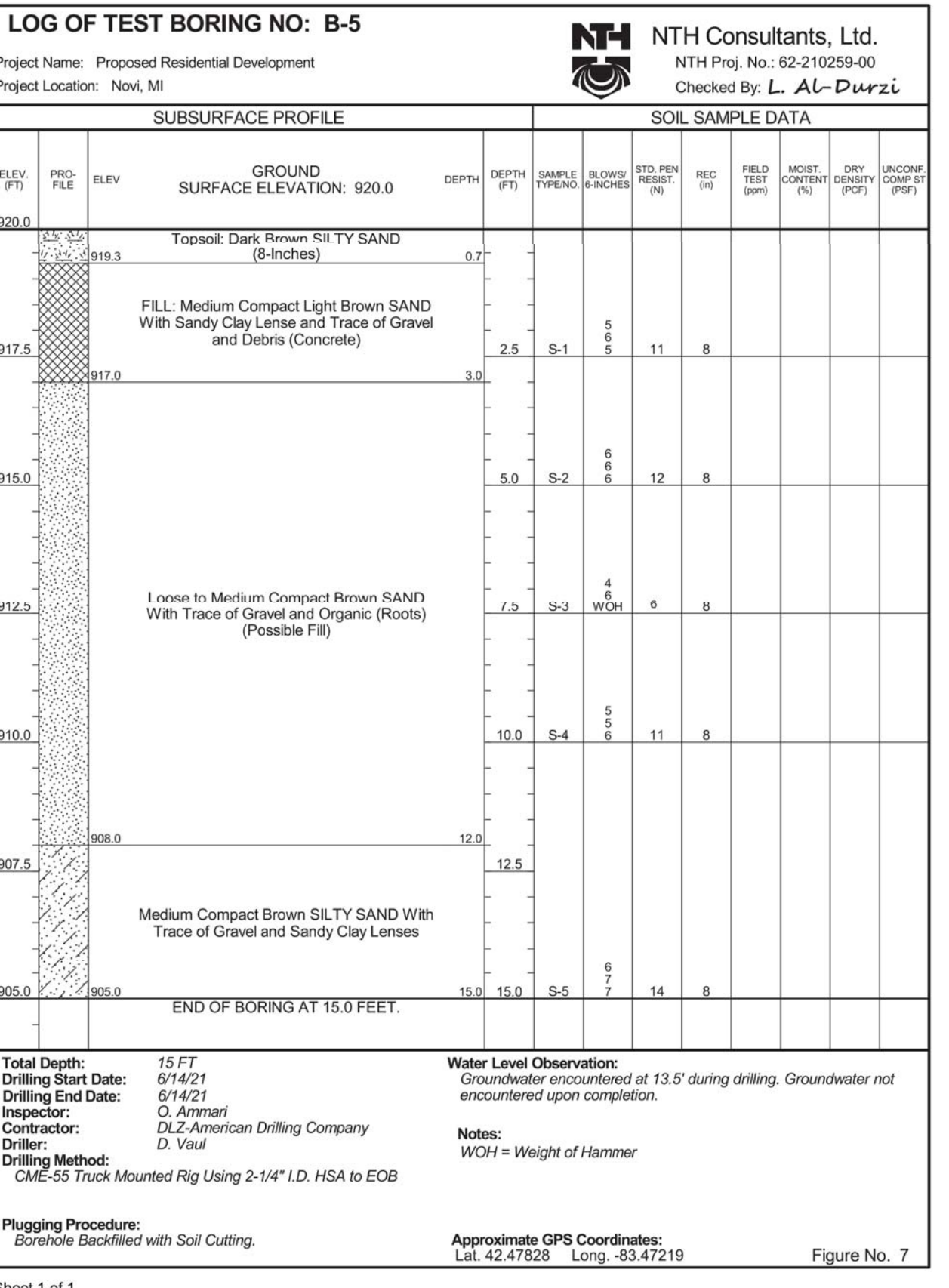
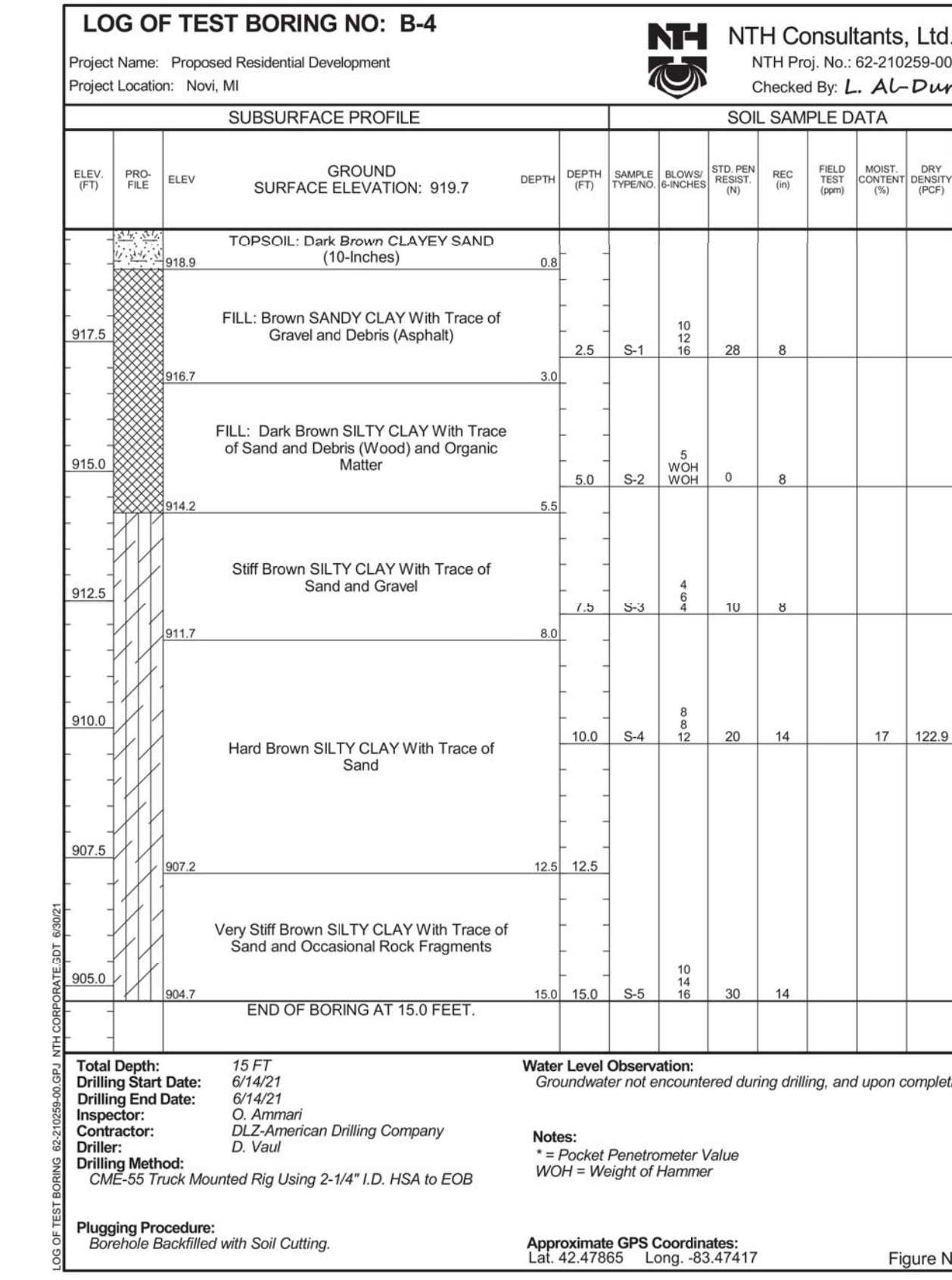
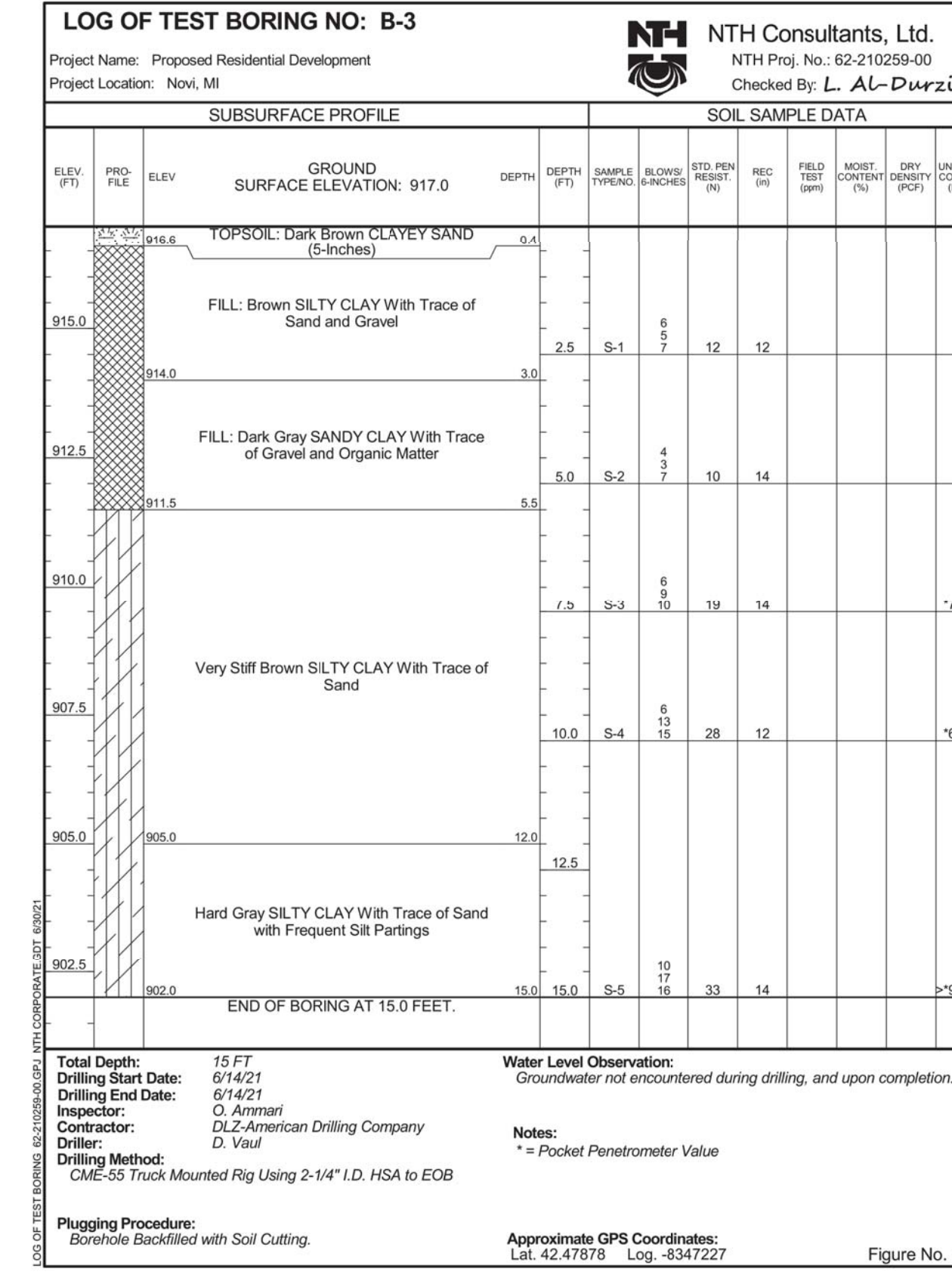
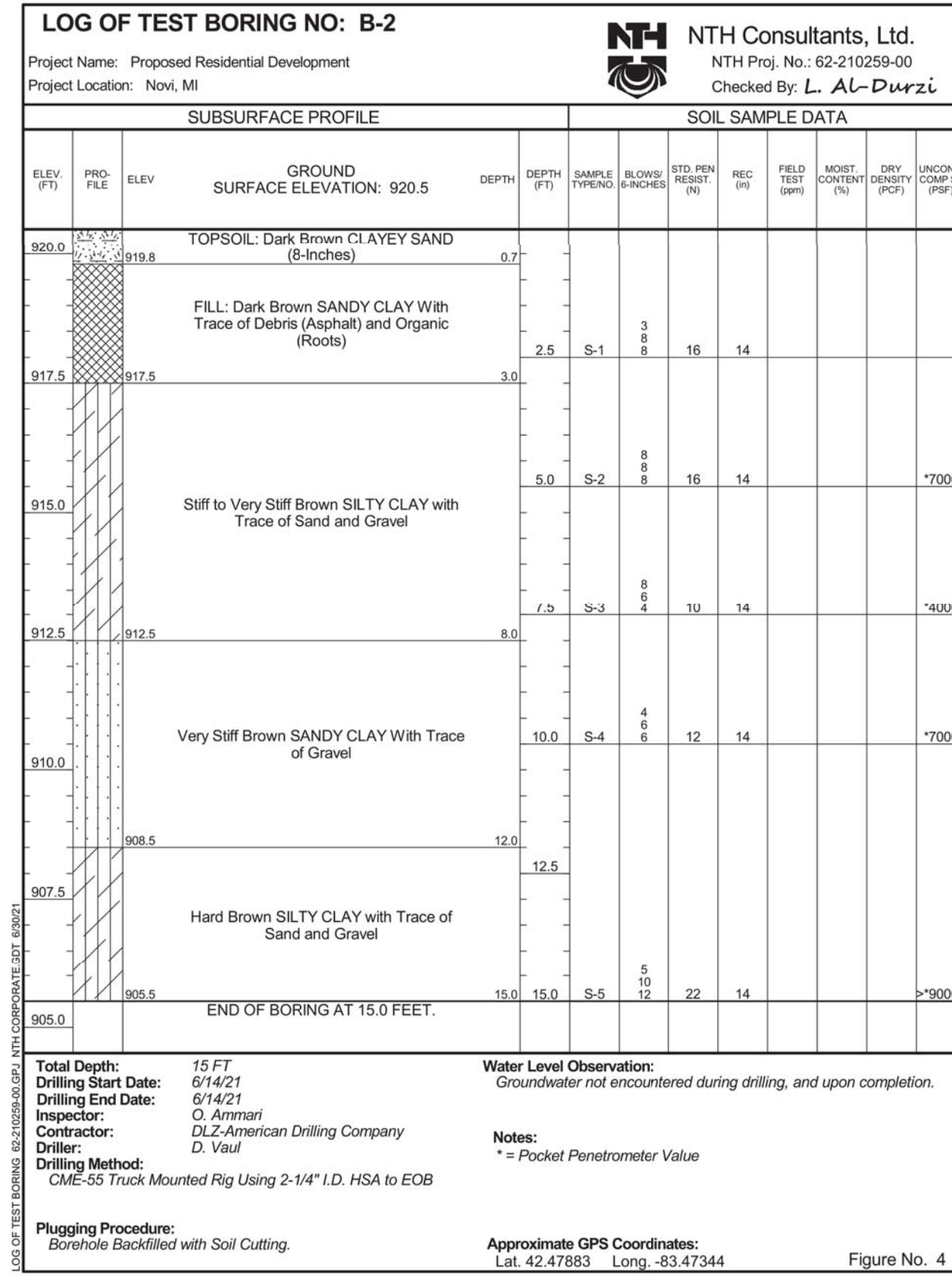
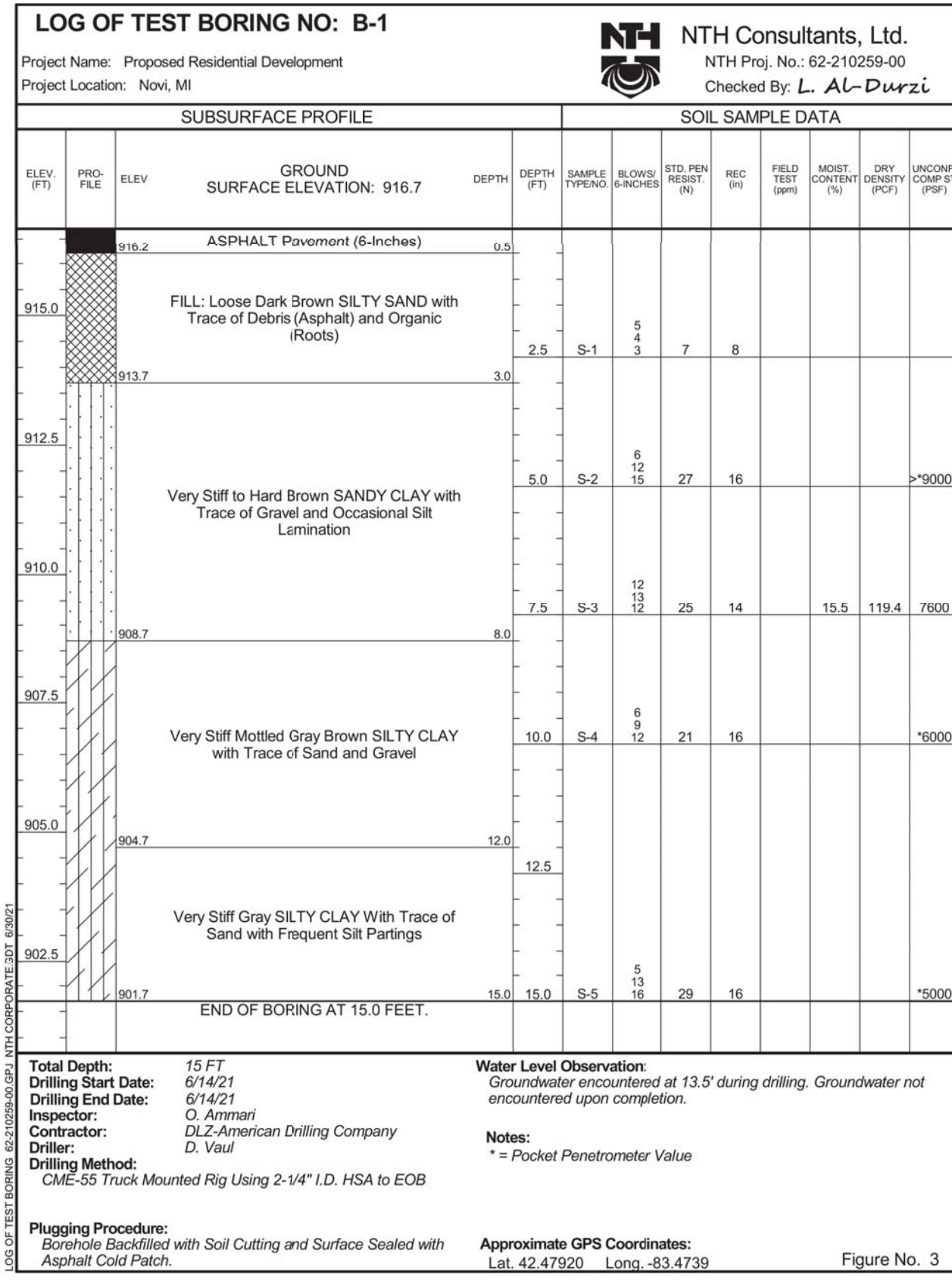
DATE: 4-7-21 DESIGNED BY: A.A. JOB NUMBER: 19-022
 CHECKED BY: J.B. DRAWING FILE: 8-19022-05

OPEN SPACE PLAN

SEIBER, KEAST ENGINEERING, L.L.C.
 CONSULTING ENGINEERS
 39205 COUNTRY CLUB DR., SUITE C8
 FARMINGTON HILLS, MI 48331
 PHONE: 248.308.3331 EMAIL: info@seiberkeast.com

SHEET
9





THE TOWNES AT MAIN STREET
 SECTION 23, TOWN 1 NORTH, RANGE 8 EAST
 CITY OF NOVI, OAKLAND COUNTY, MICHIGAN

DESIGNED BY: A.A. JOB NUMBER: 19-022
 DATE: 4-7-21 CHECKED BY: J.R. DRAWING FILE: 19022-SB

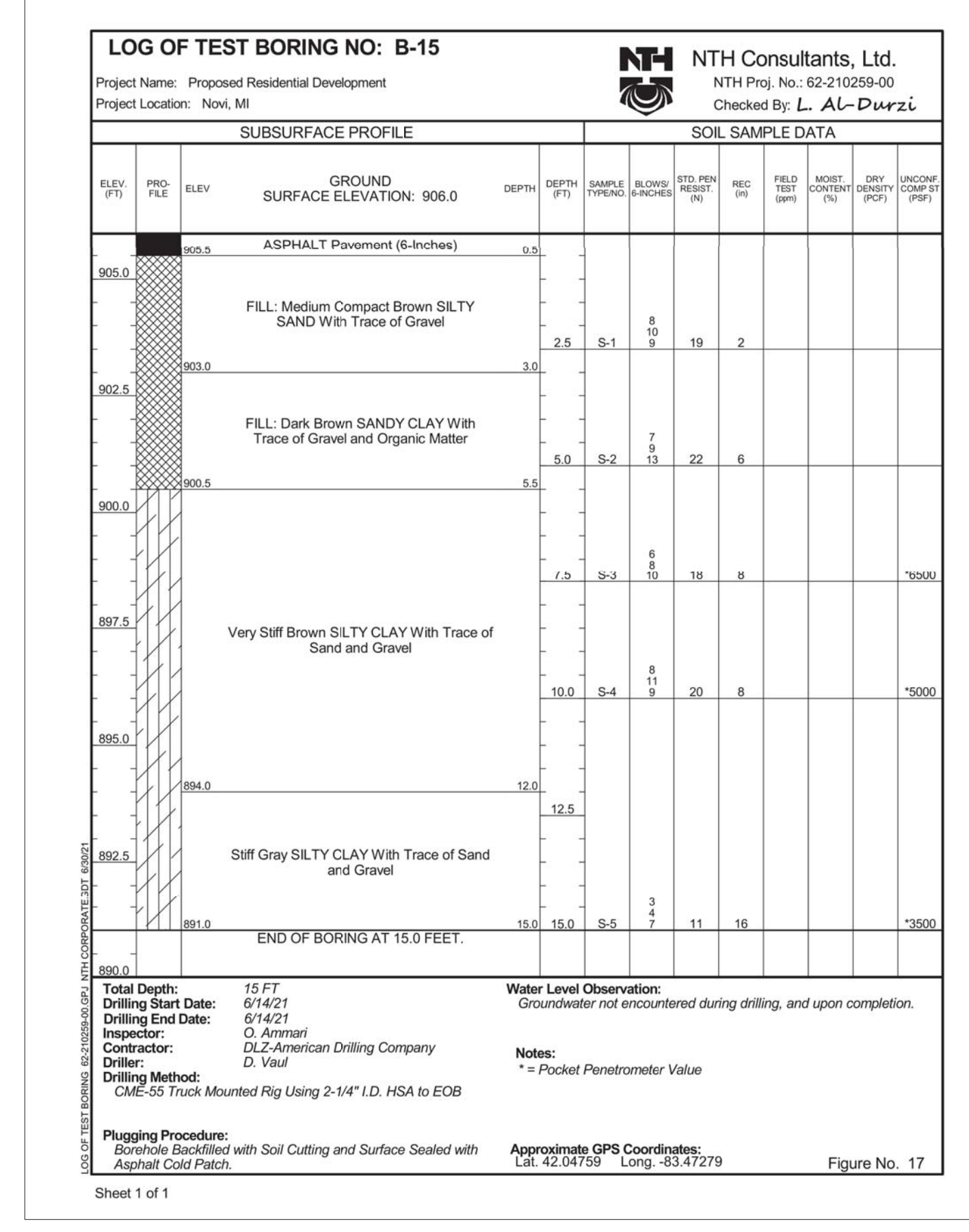
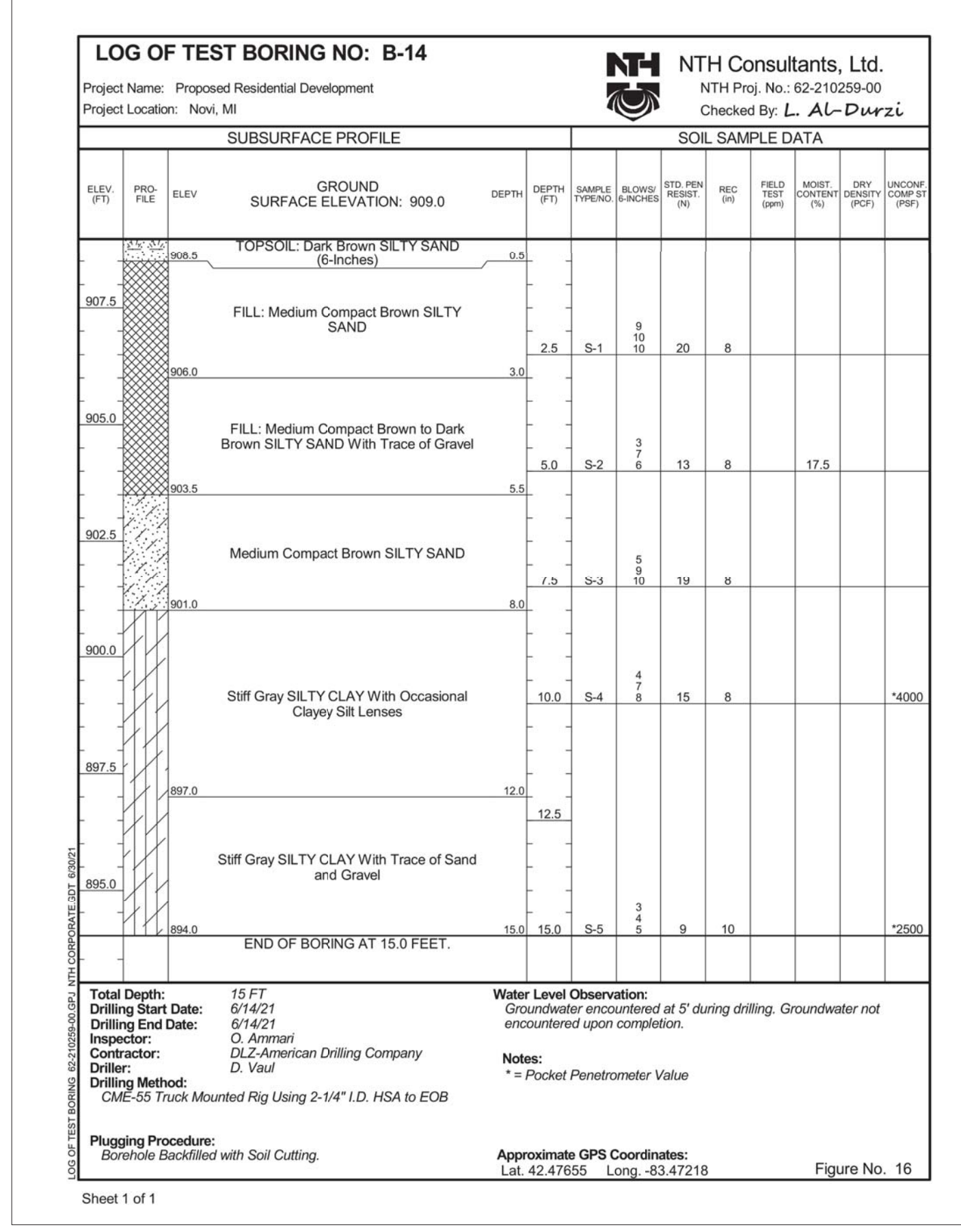
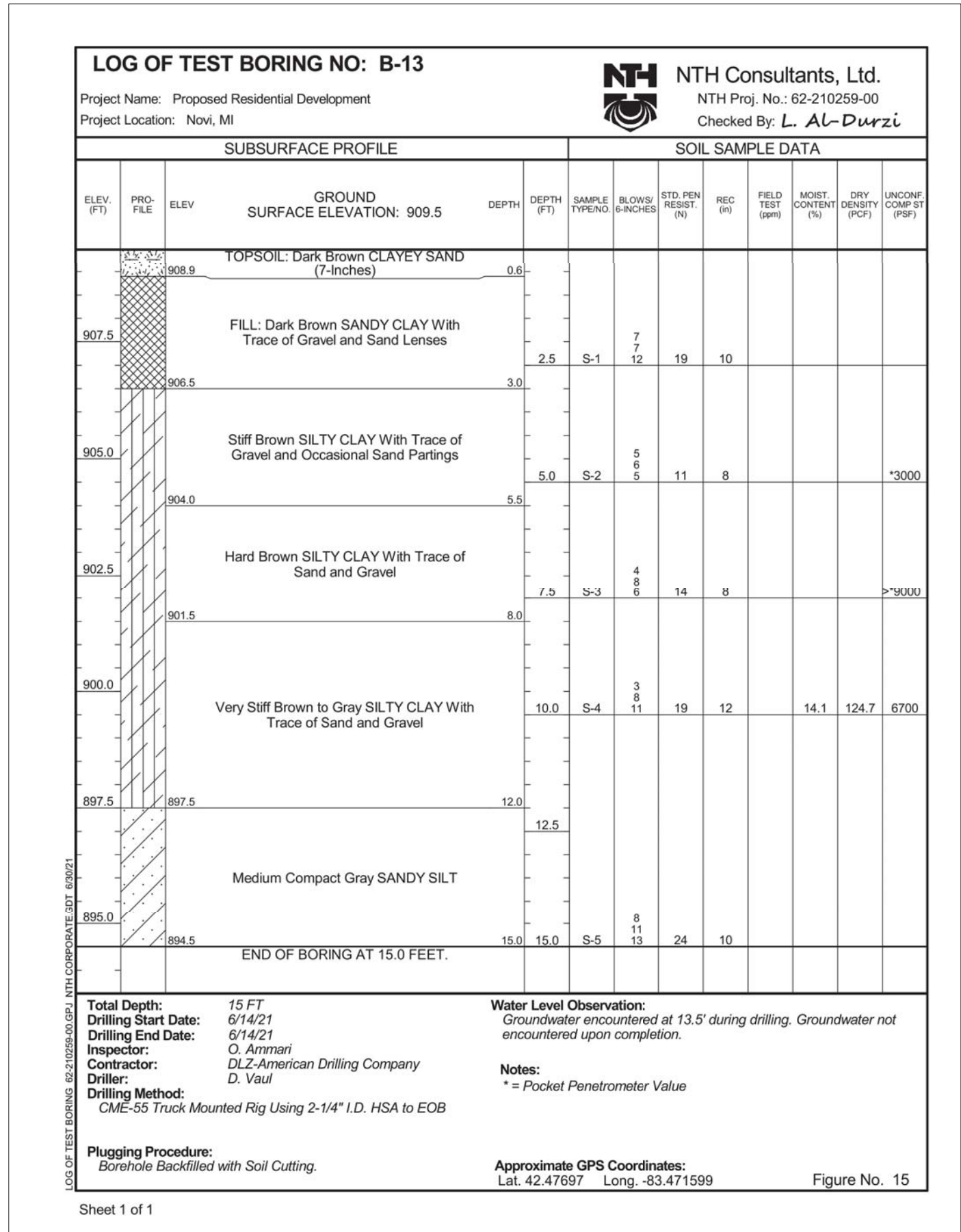
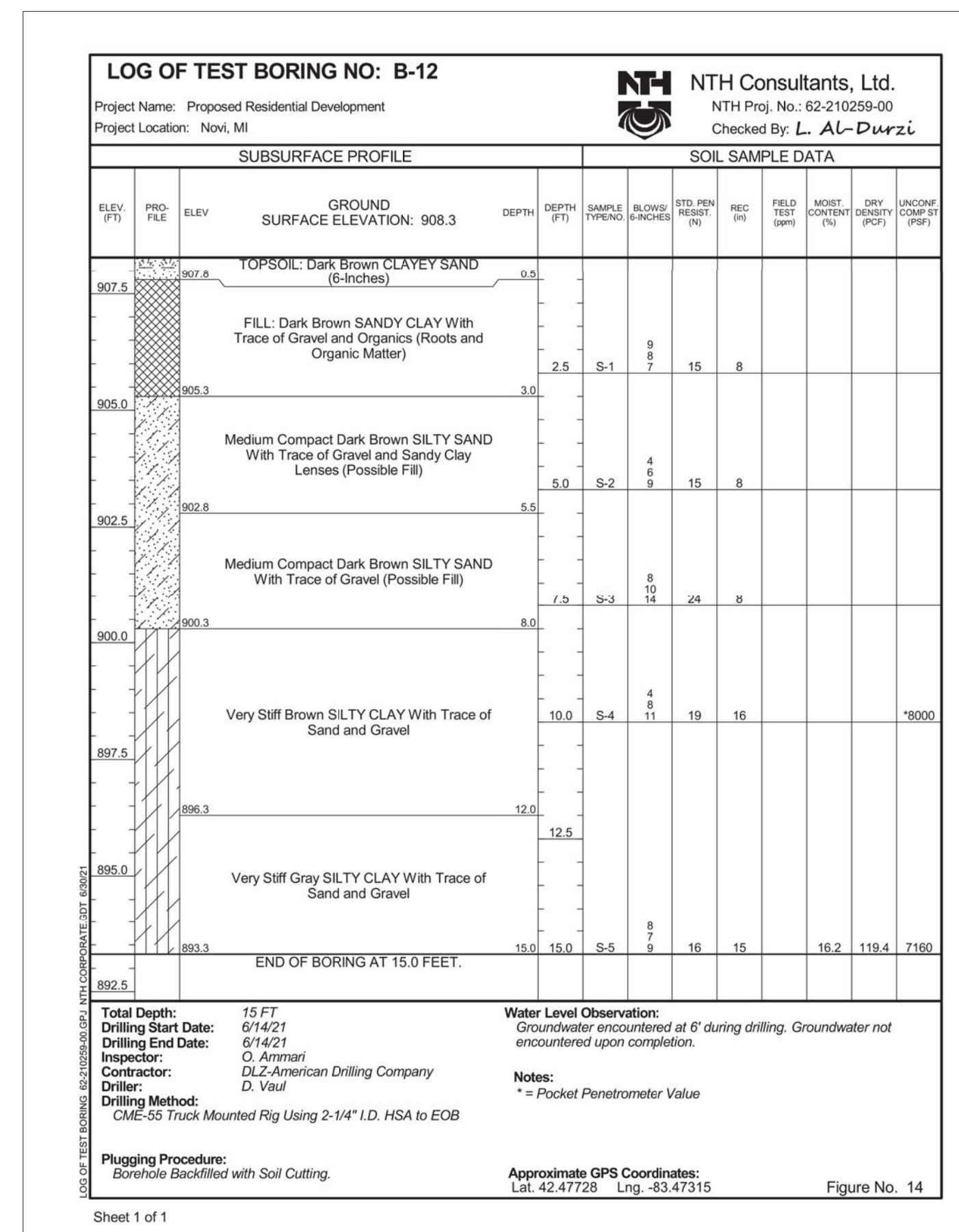
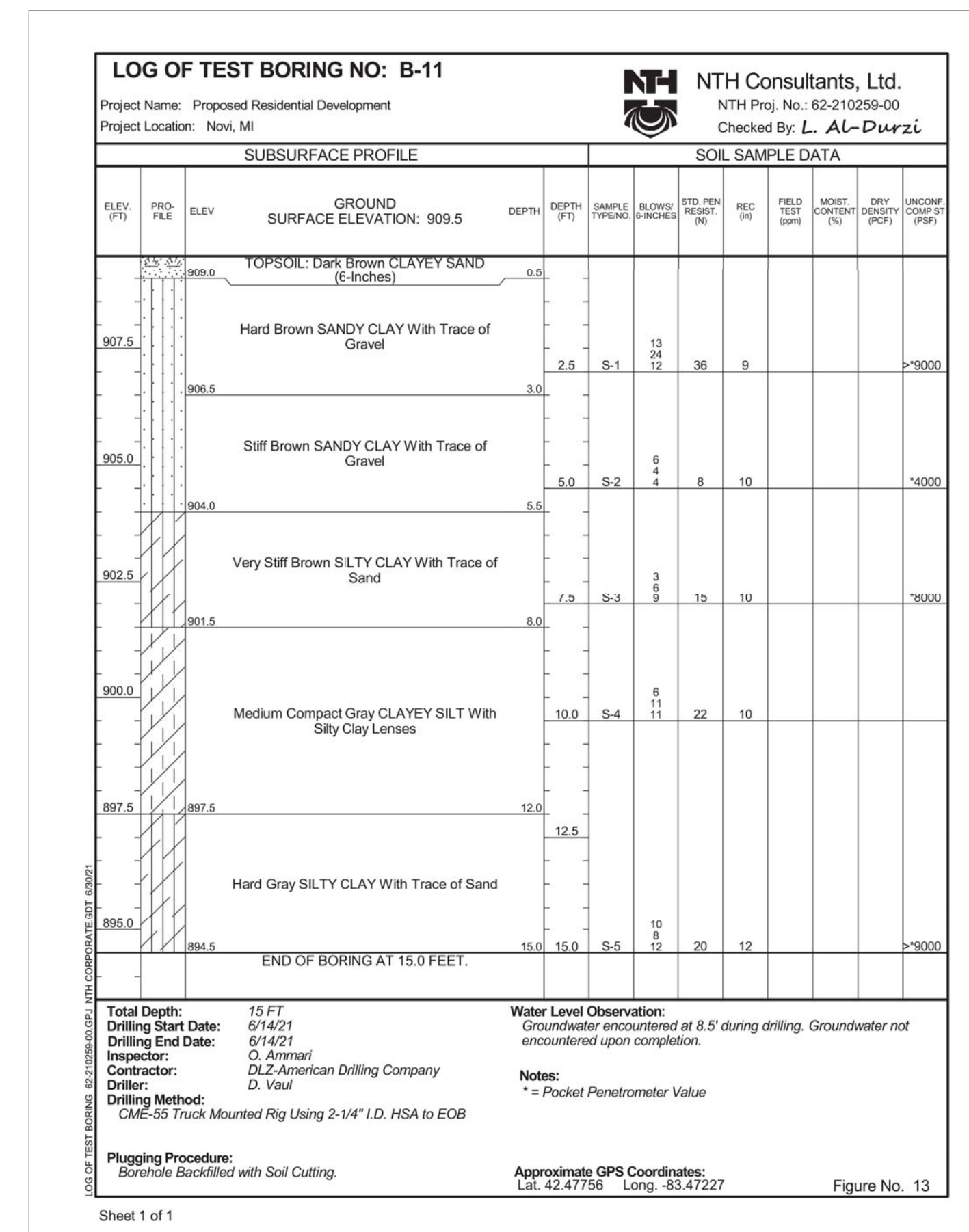
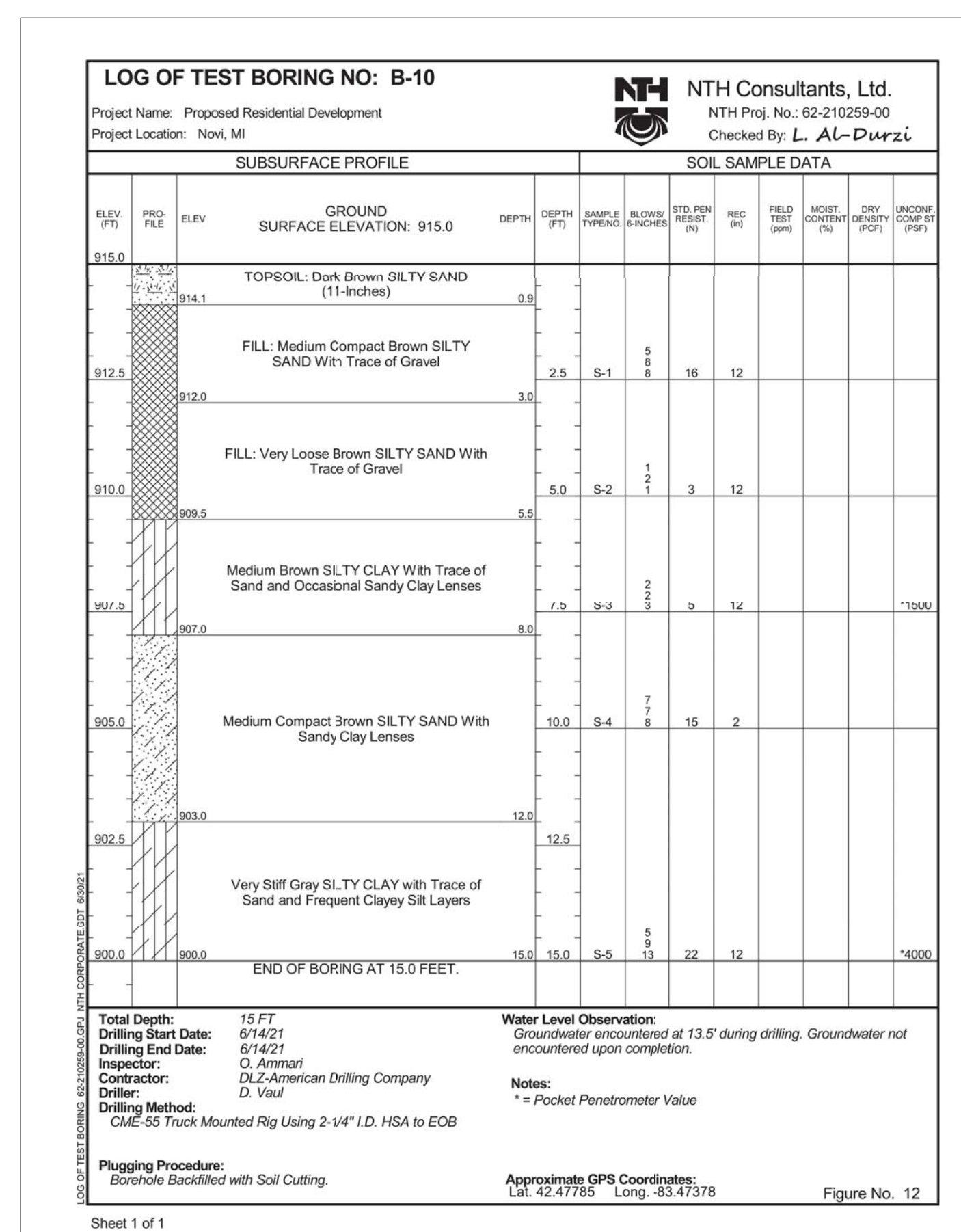
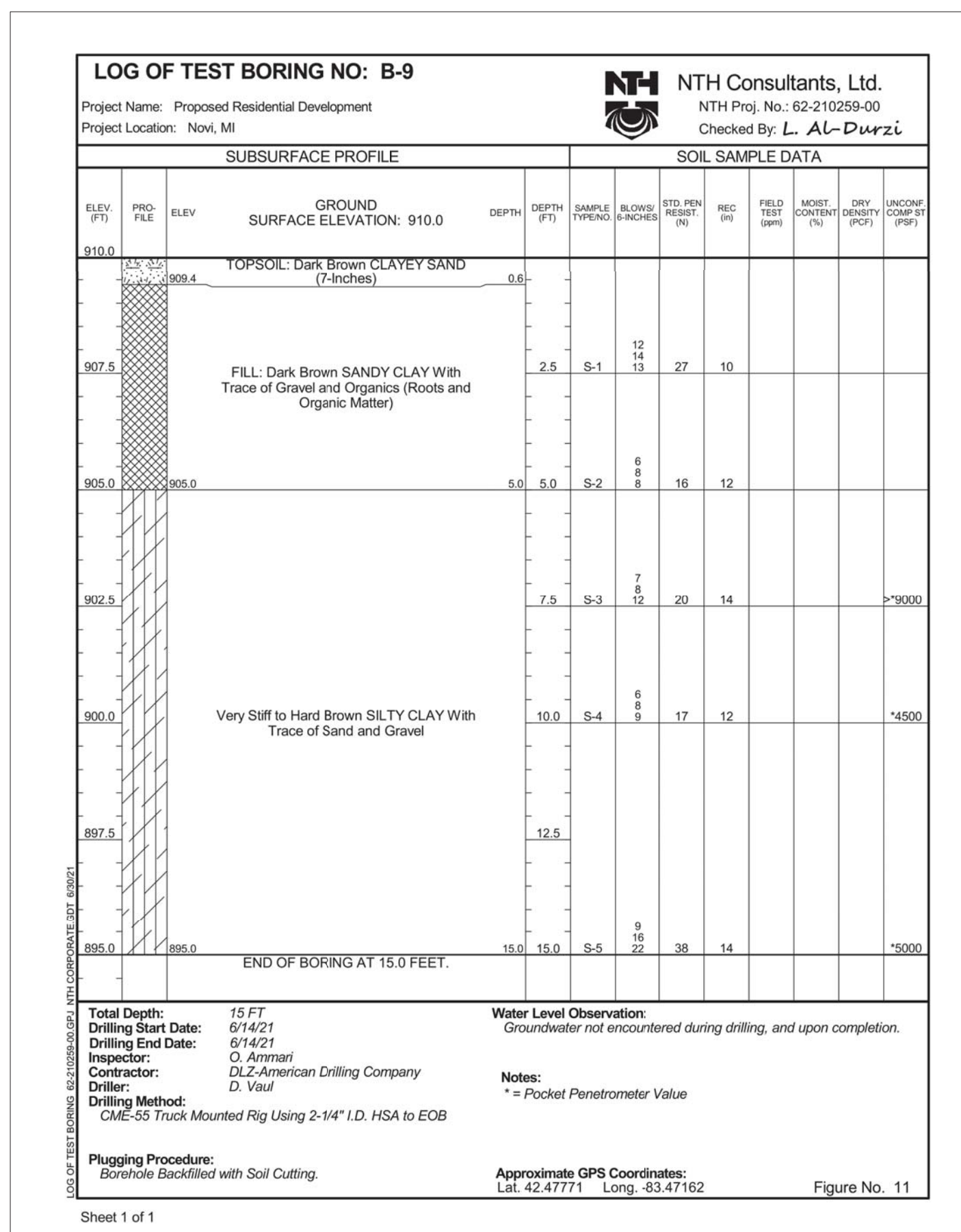
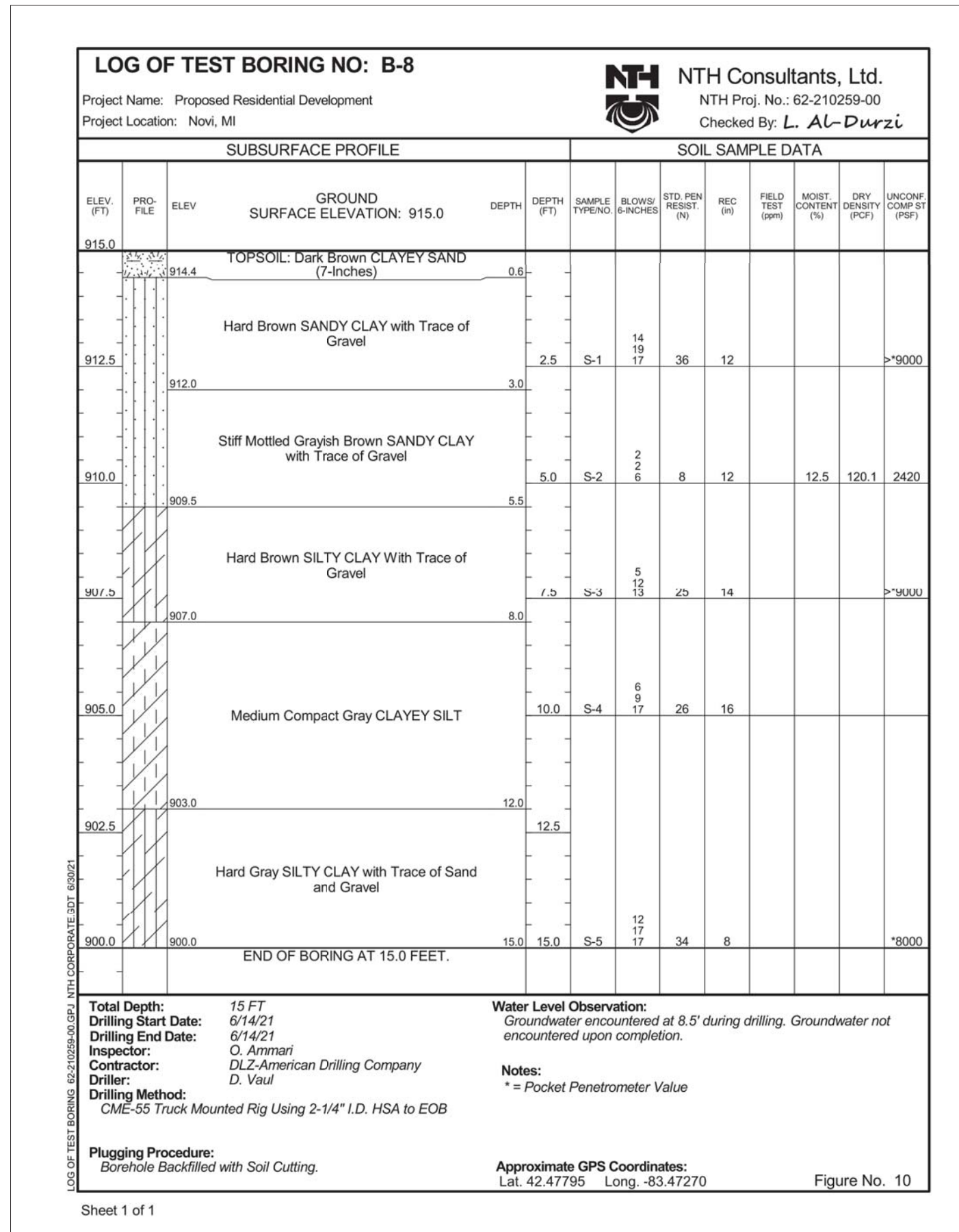
SOIL BORING LOG

SEIBER, KEAST ENGINEERING, L.L.C.
 CONSULTING ENGINEERS
 39205 COUNTRY CLUB DR., SUITE C8
 FARMINGTON HILLS, MI 48331
 PHONE: 248.308.3331 EMAIL: info@seiberkeast.com

REVISIONS		
NO.	ITEM	DATE
1.	REV. PER CITY OF NOVI REVIEW LETTER DATED 5-12-21	11-15-21

EXPLORATION LOCATION PLAN
 RESIDENTIAL DEVELOPMENT SINGH LLC
 NOVI, MICHIGAN

FIGURE NO. 1



REVISIONS		
NO.	ITEM	DATE
1.	REV. PER CITY OF NOVI REVIEW LETTER DATED 5-12-21	11-15-21

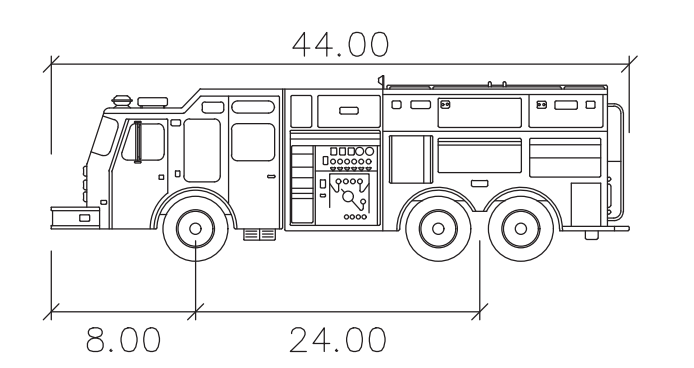
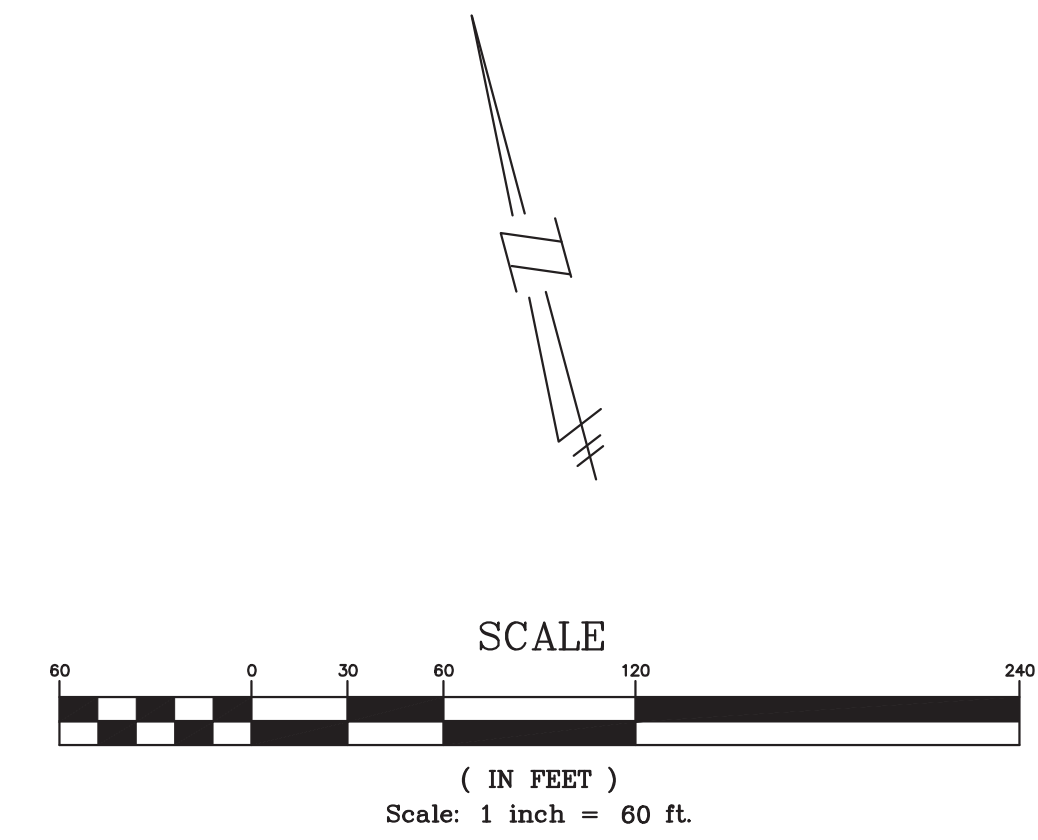
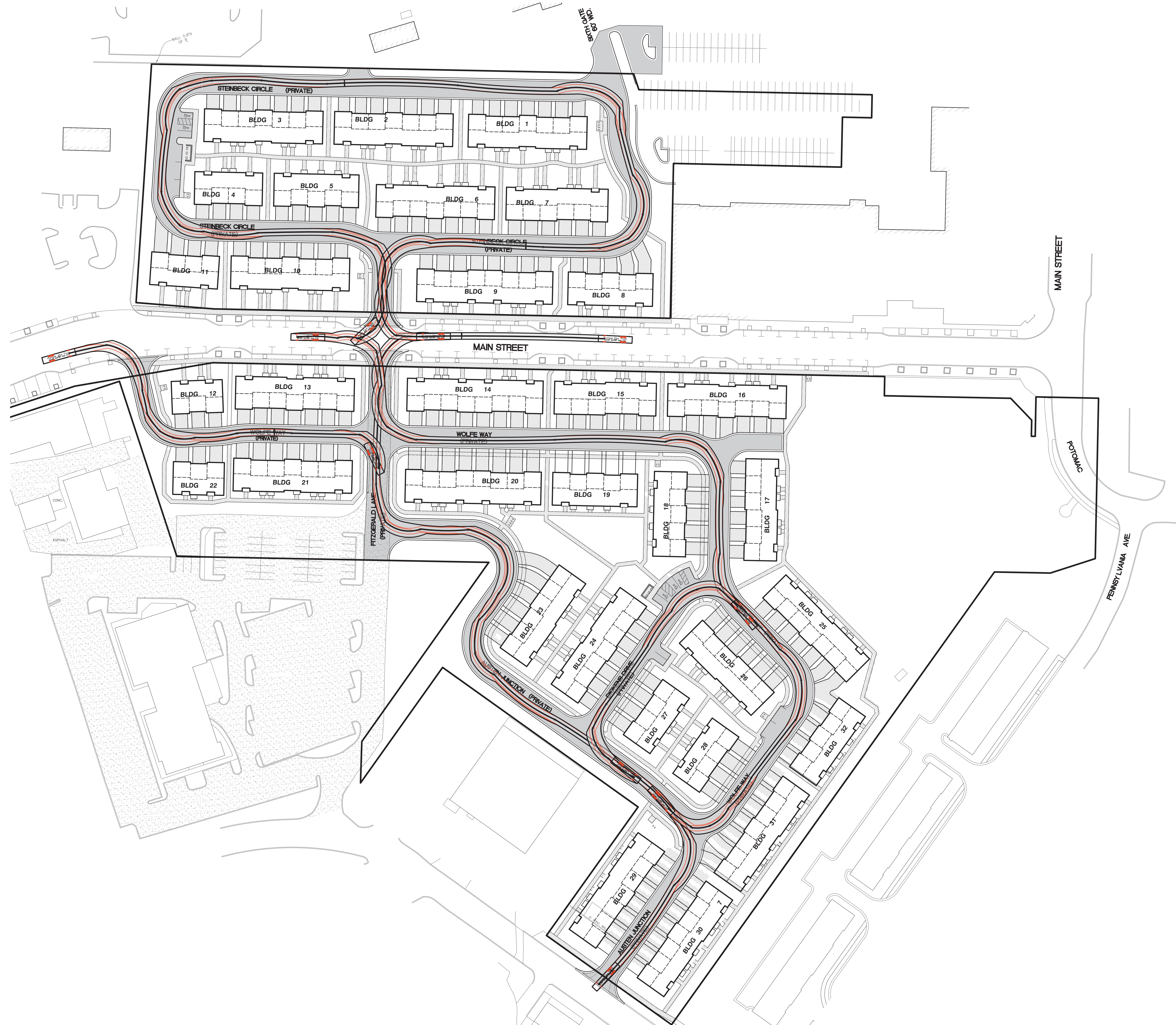
DESIGNED BY: A.A. JOB NUMBER: 19-032
DATE: 4-7-21 CHECKED BY: J.R. DRAWING FILE: 19022-SB

SOIL BORING LOG

SEIBER, KEAST ENGINEERING, L.L.C.
CONSULTING ENGINEERS
39205 COUNTRY CLUB DR., SUITE C8
FARMINGTON HILLS, MI 48331
PHONE: 248.308.3331 EMAIL: info@seiberkeast.com

SHEET 11

THE TOWNES AT MAIN STREET
SECTION 23, TOWN 1 NORTH, RANGE 8 EAST
CITY OF NOVI, OAKLAND COUNTY, MICHIGAN



Pumper Fire Truck

feet

Width : 8.50
 Track : 8.50
 Lock to Lock Time : 6.0
 Steering Angle : 37.8

THE TOWNES AT MAIN STREET
 SECTION 23, TOWN 1 NORTH, RANGE 8 EAST
 CITY OF NOVI, OAKLAND COUNTY, MICHIGAN

REVISIONS		UTILITY WARNING
NO.	ITEM	DATE
1.	REV. PER CITY OF NOVI REVIEW LETTER DATED 5-12-21	11-15-21
2.	REV. PER CITY OF NOVI REVIEW LETTER DATED 11-31-22	3-6-22

UNDERGROUND UTILITY LOCATIONS AS SHOWN ON THE PLAN, WERE OBTAINED FROM UTILITY OWNER AND NOT FIELD LOCATED.

811 Know what's below.
 Call before you dig.

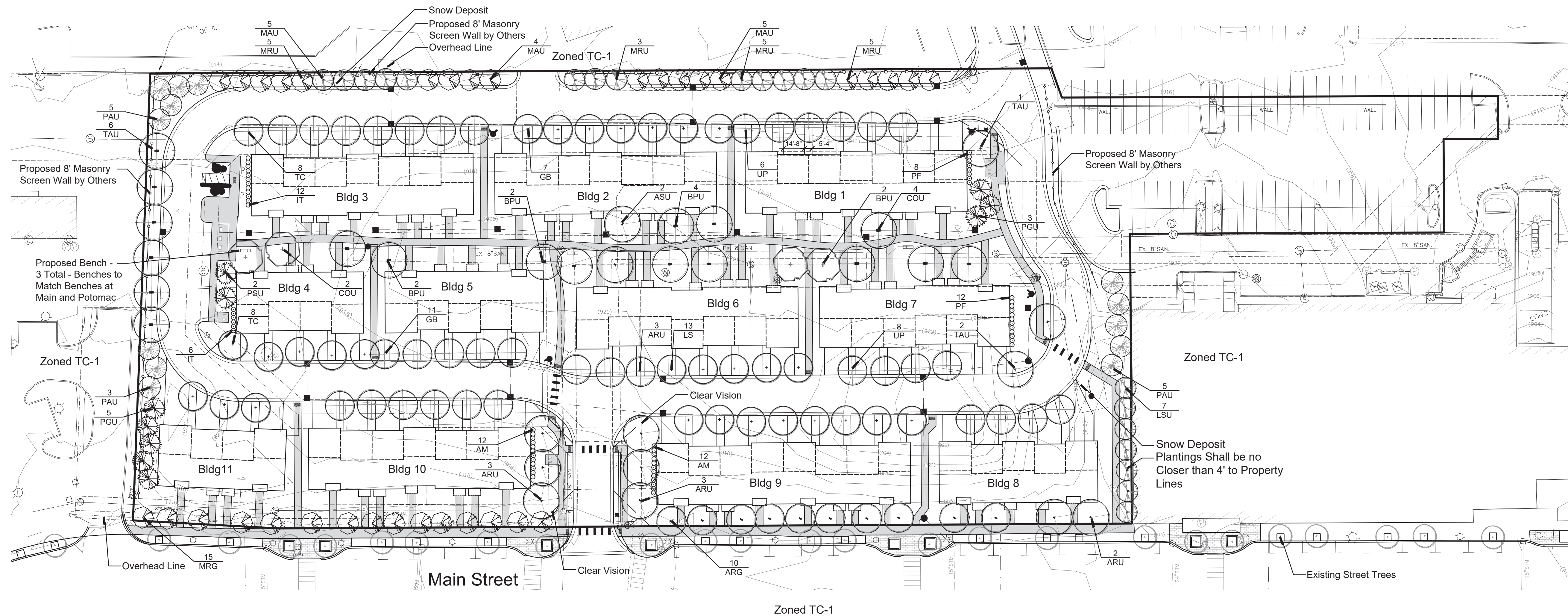
THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF AND/OR RELOCATION OF ALL UTILITIES THAT MAY INTERFERE WITH CONSTRUCTION.

DATE: 4-7-21 DESIGNED BY: A.A. JOB NUMBER: 19-022
 CHECKED BY: J.E. DRAWING FILE: 13-10022-AT

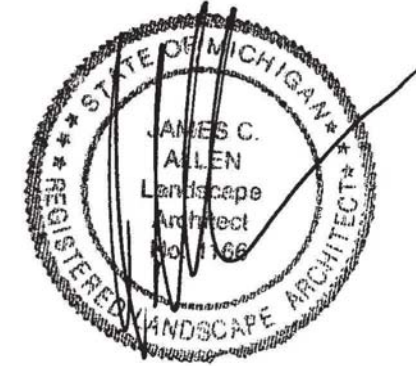
FIRE TRUCK ROUTE

SEIBER, KEAST
ENGINEERING, L.L.C.
 CONSULTING ENGINEERS
 39205 COUNTRY CLUB DR., SUITE C8
 FARMINGTON HILLS, MI 48331
 PHONE: 248.308.3331 EMAIL: info@seiberkeast.com

SHEET
12



Seal:



Title:
Landscape Plan

Project:
**The Townes at Main Street
 Novi, Michigan**

Prepared for:
 Singh Development, LLC
 7125 Orchard Lake Road, Suite 200
 West Bloomfield, Michigan 48322
 248.865.1614

Landscape Summary - North

Existing Zoning	TC-1
Greenbelt	
Street Frontage not Adjacent to Pkg.	695'
Less Drive Openings	27'
Net Frontage	668'
Trees Required	22.2 Trees (668' / 30')
Trees Provided	22 Trees
Ornamental Trees Required	33 Trees (668' / 20')
Ornamental Trees Provided	NA
Parking Lot Landscaping	
Parking Lot Perimeter Length	163 l.f.
Trees Required	4.6 Trees (163' / 35')
Trees Provided	5 Trees (Multi-Family Trees)
Interior Street Trees	
Street Frontage	3,206 l.f.
Less Drives	1,079 l.f.
Net Street Frontage	2,127 l.f.
Trees Required	60.7 Trees (2,127 / 35)
Trees Provided	61 Trees
Multi-Family Requirements	
Units Proposed	67 Units
Trees Required	201 Trees (67 x 3)
Trees Provided	100 Trees

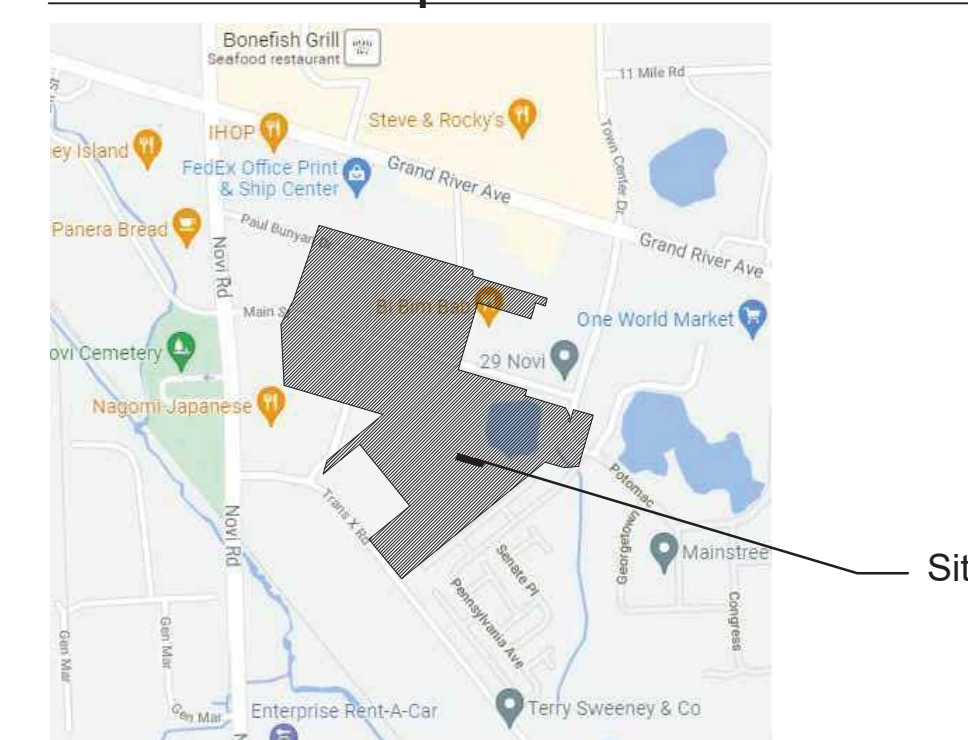
- Requested Waivers:
- Sec 5.5.3.A.ii Requiring a 10'-15' High Berm Adjacent to the I-1 Zoning District and a 6'-8' Berm Adjacent to Commercial Areas. The Proposed Development is Located within the Town Center District and is Intended to be Urban in Nature. Berms are Generally Suburban and are Inappropriate in this Location. An 8' Screen Wall is Proposed In-Lieu of the Berm.
 - Sec 5.5.3.B.ii.f Requiring ROW Landscaping. Due to Existing Grades, a Storm Sewer is Proposed on the South Side of Main Street Prohibiting Plantings. The Waiver is for 19 Trees.
 - Sec 5.5.F.iii.b.(1) Requiring 3 Trees per Unit. This Requirement Cannot be Met due to Limited Planting Area. A Waiver of 293 Trees is Requested.
 - Sec 5.5.F.iii.b.(1) Requiring 75% of the Trees be Deciduous Canopy or Large Evergreen. A Waiver of 5% is Requested.
 - Sec 5.5.F.iii.b.(3) Requiring 35% of Building Facades Facing Streets to be Landscaped. The Proposed Units are Rear Loaded Townhomes so the Landscape Area is Limited by the Driveways. A Waiver Schedule is Shown on Sheet L-4. Ample Landscaping is Shown on the Building Fronts.

- Notes:
- Soils Information is Found on Sheet 5.
 - Trees Shall be Planted no Closer than 10' Utility Structure Including Hydrants and 5' from Utility Lines.
 - Trees Shall not be Planted within 4' of Property Lines.
 - Utility Boxes Shall be Screen per Detail on Sheet L-7.
 - Phragmites are Present on this Site.
 - Overhead Power Lines are Indicated on the Plan.
 - An Irrigation Plan will be Provided for Stamping Sets.

Plant List - L-1

sym.	qty.	botanical name	common name	caliper	spacing	root	height	price	total	Species	Genus	Native	Total
Greenbelt													
ARG	10	Acer x freemanii 'Armstrong'	Armstrong Maple	3.0"	as shown	B&B		\$ 400.00	\$ 4,000.00	11%	12%	1	1
MRG	15	Malus Red Barron	Red Barron Crab Apple	2.5"	as shown	B&B		\$ 250.00	\$ 3,750.00	8%	8%		
25 Trees Provided													
Interior Street Trees													
LS	13	Liquidambar styraciflua 'Moraine'	Moraine Sweetgum	3.0"	as shown	B&B		\$ 400.00	\$ 5,200.00	11%	11%		1
GB	18	Ginkgo biloba 'Autumn Gold'	Autumn Gold Ginkgo	3.0"	as shown	B&B		\$ 400.00	\$ 7,200.00	10%	10%		1
TC	16	Tilia cordata 'Chancellor'	Chancellor Linden	3.0"	as shown	B&B		\$ 400.00	\$ 6,400.00	9%	9%		1
UP	14	Ulmus 'Pioneer'	Pioneer Elm	3.0"	as shown	B&B		\$ 400.00	\$ 5,600.00	8%	8%	1	1
61 Trees Provided													
Unit Trees													
ARU	11	Acer x freemanii 'Armstrong'	Armstrong Maple	3.0"	as shown	B&B		\$ 400.00	\$ 4,400.00	11%	12%		1
ASU	2	Acer saccharum	Sugar Maple	3.0"	as shown	B&B		\$ 400.00	\$ 800.00	1%	15%	1	1
BPU	10	Betula papyrifera 'Snowy'	Canoe Birch, Multi Stem		as shown	B&B	12'	\$ 400.00	\$ 4,000.00	5%	5%	1	1
COU	6	Celtis occidentalis	Northern Hackberry	3.0"	as shown	B&B		\$ 400.00	\$ 2,400.00	3%	3%		1
LSU	7	Liquidambar styraciflua 'Moraine'	Moraine Sweetgum	3.0"	as shown	B&B		\$ 400.00	\$ 2,800.00	11%	11%		1
MAU	14	Malus Adirondack	Adirondack Crab Apple	2.5"	as shown	B&B		\$ 250.00	\$ 3,500.00	8%	17%		1
MRU	18	Malus Red Barron	Red Barron Crab Apple	2.5"	as shown	B&B		\$ 250.00	\$ 4,500.00	10%	17%		1
PAU	13	Picea abies	Norway Spruce		as shown	B&B	8'	\$ 325.00	\$ 4,225.00	7%	11%		1
PGU	8	Picea glauca 'Densata'	Black Hills Spruce		as shown	B&B	8'	\$ 325.00	\$ 2,600.00	4%	11%	1	1
PSU	2	Pinus strobus	White Pine		as shown	B&B	8'	\$ 325.00	\$ 650.00	1%	1%	1	1
TAU	9	Tilia americana 'Redmond'	Redmond Linden	3.0"	as shown	B&B		\$ 400.00	\$ 3,600.00	5%	5%	1	1
100 Trees Provided													
186 Total Trees Provided													
General Plantings													
AM	24	Aronia melanocarpa	Black Chokeberry		as shown	cont	36"	\$ 50.00	\$ 1,200.00			1	1
IT	18	Itea virginica	Virginia Sweetspire		as shown	cont	36"	\$ 50.00	\$ 900.00			1	1
PF	20	Potentilla fruticosa 'Abbotswood'	Bush Cinquefoil		as shown	cont	36"	\$ 50.00	\$ 1,000.00			1	1
Total % Native 11 17													
35	4"	Deep Shredded Hardwood Bark Mulch						\$ 35.00	\$ 1,225.00				
354		Sod. s.y.						\$ 6.00	\$ 2,124.00				
		Irrigation						\$	\$ 35,000.00				
L-1 Total									\$ 107,074.00				

Location Map



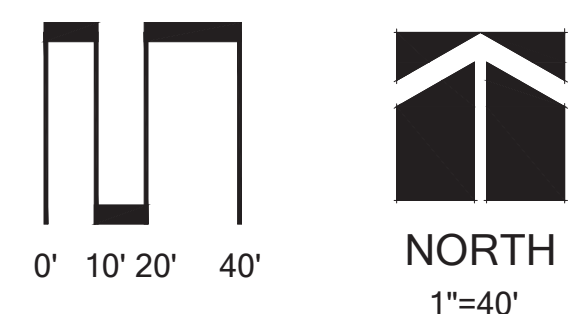
NOT TO SCALE

Revision:
 21-023

Issued:
 April 8, 2021
 November 15, 2021
 March 8, 2022

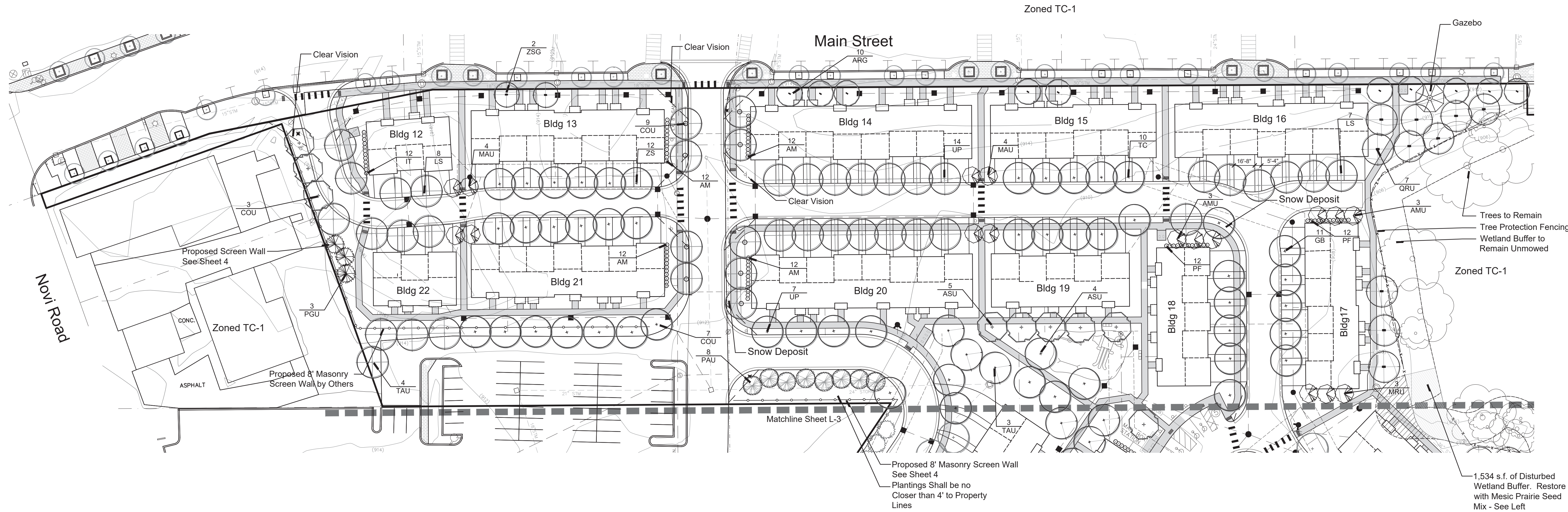
Job Number:
 21-023

Drawn By: jca
 Checked By: jca

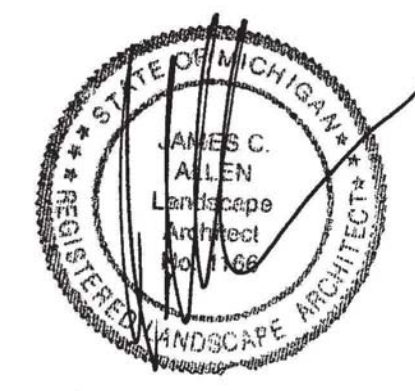


Sheet No.





Seal:



Title:
Landscape Plan

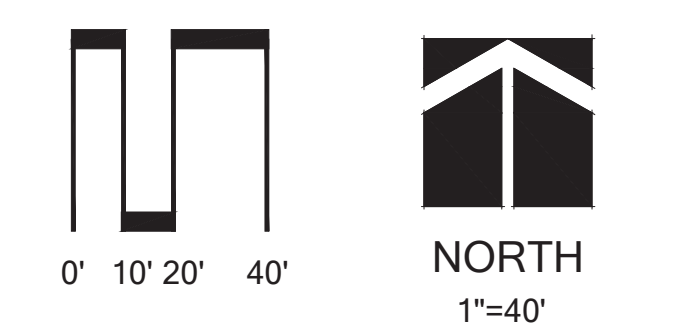
Project:
**The Townes at Main Street
 Novi, Michigan**

Prepared for:
 Singh Development, LLC
 7125 Orchard Lake Road, Suite 200
 West Bloomfield, Michigan 48322
 248.865.1614

Revision:
 Issued:
 Submission April 8, 2021
 Revised November 15, 2021
 Revised March 8, 2022

Job Number:
 21-023

Drawn By: jca
 Checked By: jca



Sheet No.

Landscape Summary - South

Existing Zoning	TC-1
Greenbelt - Main Street	
Street Frontage not Adjacent to Pkg	969'
Less Drive Openings	54'
Net Frontage	915'
Trees Required	30.5 Trees (915' / 30')
Trees Provided	12 Trees
Ornamental Trees Required	45.8 Trees (915' / 20')
Ornamental Trees Provided	NA
Greenbelt - Trans-X	
Street Frontage not Adjacent to Pkg	200'
Less Drive Openings	54'
Net Frontage	146'
Trees Required	4.8 Trees (146' / 30')
Trees Provided	0 Trees
Ornamental Trees Required	7.3 Trees (146' / 20')
Ornamental Trees Provided	8
Parking Lot Landscaping	
Parking Lot Perimeter Length	150 l.f.
Trees Required	4.2 Trees (150' / 35')
Trees Provided	4 Trees (Multi-Family Trees)
Interior Street Trees	
Street Frontage	5,724 l.f.
Less Drives	2,016 l.f.
Net Street Frontage	3,708 l.f.
Trees Required	105.9 Trees (3,708 / 35')
Trees Provided	106 Trees
Sheet L-2	63 Trees
Sheet L-3	37 Trees
Multi-Family Requirements	
Units Proposed	125 Units
Trees Required	375 Trees (125 x 3)
Trees Provided	187 Trees
Sheet L-2	63 Trees
Sheet L-3	124 Trees

Plant List

Qty	Botanical Name	Common Name	Caliper	Spacing	Root Height	Price	Total	Species	Genus	Native	Total
10	Acer x freemanii 'Armstrong'	Armstrong Maple	3.0"	as shown	8.5B	\$ 400.00	\$ 4,000.00	7%	13%	1	1
2	Zelkova serata 'Green Vase'	Green Vase Zelkova	3.0"	as shown	8.5B	\$ 400.00	\$ 800.00	10%	10%	1	1
Interior Street Trees											
12	Liquidambar styraciflua 'Moraine'	Moraine Sweetgum	3.0"	as shown	8.5B	\$ 400.00	\$ 6,000.00	10%	10%	1	1
11	Ginkgo biloba 'Autumn Gold'	Autumn Gold Ginkgo	3.0"	as shown	8.5B	\$ 400.00	\$ 4,400.00	6%	8%	1	1
12	Tilia cordata 'Chancellor'	Chancellor Linden	3.0"	as shown	8.5B	\$ 400.00	\$ 4,800.00	7%	12%	1	1
21	Ulmus 'Pioneer'	Pioneer Elm	3.0"	as shown	8.5B	\$ 400.00	\$ 8,400.00	15%	15%	1	1
25	Zelkova serata 'Green Vase'	Green Vase Zelkova	3.0"	as shown	8.5B	\$ 400.00	\$ 4,800.00	10%	10%	1	1
Use Trees											
5	Ameiheria laevis	Shadblow	2.5"	as shown	8.5B	\$ 250.00	\$ 1,500.00	4%	10%	1	1
9	Acer saccharum	Sugar Maple	3.0"	as shown	8.5B	\$ 400.00	\$ 3,600.00	6%	13%	1	1
19	Celtis occidentalis	Northern Hackberry	3.0"	as shown	8.5B	\$ 400.00	\$ 7,600.00	13%	13%	1	1
8	Malus Adirondack	Adirondack Crab Apple	2.5"	as shown	8.5B	\$ 250.00	\$ 2,000.00	6%	8%	1	1
3	Malus Red Barron	Red Barron Crab Apple	2.5"	as shown	8.5B	\$ 250.00	\$ 750.00	2%	8%	1	1
8	Picea abies	Honey Spruce	3.0"	as shown	8.5B	\$ 325.00	\$ 2,600.00	6%	8%	1	1
3	Picea glauca 'Densata'	Black Hills Spruce	3.0"	as shown	8.5B	\$ 325.00	\$ 975.00	2%	8%	1	1
7	Tilia americana 'Redmond'	Redmond Linden	3.0"	as shown	8.5B	\$ 400.00	\$ 2,800.00	6%	12%	1	1
63 Trees Provided											
General Plantings											
48	Aronia melanocarpa	Black Chokeberry	as shown	cont	36"	\$ 50.00	\$ 2,400.00			1	1
12	Desmodium illinoense	Virginia Sweetpea	as shown	cont	36"	\$ 50.00	\$ 600.00			1	1
24	Potentilla fruticosa 'Abbotswood'	Bush Cinquefoil	as shown	cont	36"	\$ 50.00	\$ 1,200.00			1	1
Total 107											
% Native 59%											
18	4" Deep Shredded Hardwood Bark Mulch					\$ 35.00	\$ 630.00				
654	Spot, s.y.					\$ 6.00	\$ 3,924.00				
170	Buffer Seeding					\$ 6.00	\$ 1,020.00				
	Irrigation					\$ 35,000.00					
L-2 Total							\$ 98,999.00				

Wetland Buffer Seed Mix

Mesic Prairie Mix
 This mix contains at least (2) Temporary, (14) Flower & (4) Grasses & Sedges.

Common Name	Scientific Name	#/acre
Temporary Grasses 50%		
Seed Oats	Avena sativa	20
Annual Rye	Lolium multiflorum	
Native Grasses		12
Big Bluestem Grass	Andropogon gerardii	
Copper Oval Sedge	Carex bicknelli	
Common Wild Rye	Elymus canadensis	
Blue Top Grass	Panicum scoparium	
Little Bluestem	Schizachyrium scoparium	
Indian Grass	Sorghastrum nutans	
Native Wildflowers: 30%		8
New England Aster	Aster novae-angliae	
Heath Aster	Aster pilosus	
Tall Coreopsis	Cornopsis rugosus	
White False Indigo	Baptisia racemosa	
Purple Coneflower	Echinacea purpurea	
Black-eyed Suson	Rudbeckia hirta	
Ok Eye Sunflower	Helopsis scabra	
Rough Blazing Star	Liatris spicata	
Orange Flaming Star	Liatris spicata	
Bergamot (Beebalm)	Monarda fistulosa	
Golden Rod	Physalis virginiana	
Blizzard Star	Physalis virginiana	
Black-eyed Susan	Rudbeckia hirta	
Green-headed Coneflower	Rudbeckia laciniata	
Yellow Coneflower	Rudbeckia hirta	
Prairie Dock	Sium terabrinthiacum	
Tall Goldenrod	Solidago altissima	
Lance-headed Goldenrod	Solidago geminata	
Stiff Goldenrod	Solidago rigida	
Sudbury	Tripsacum danielsii	
White Vervain	Verbena stricta	
Blue Vervain	Verbena hastata	
Total Pounds Per Acre		40 lbs

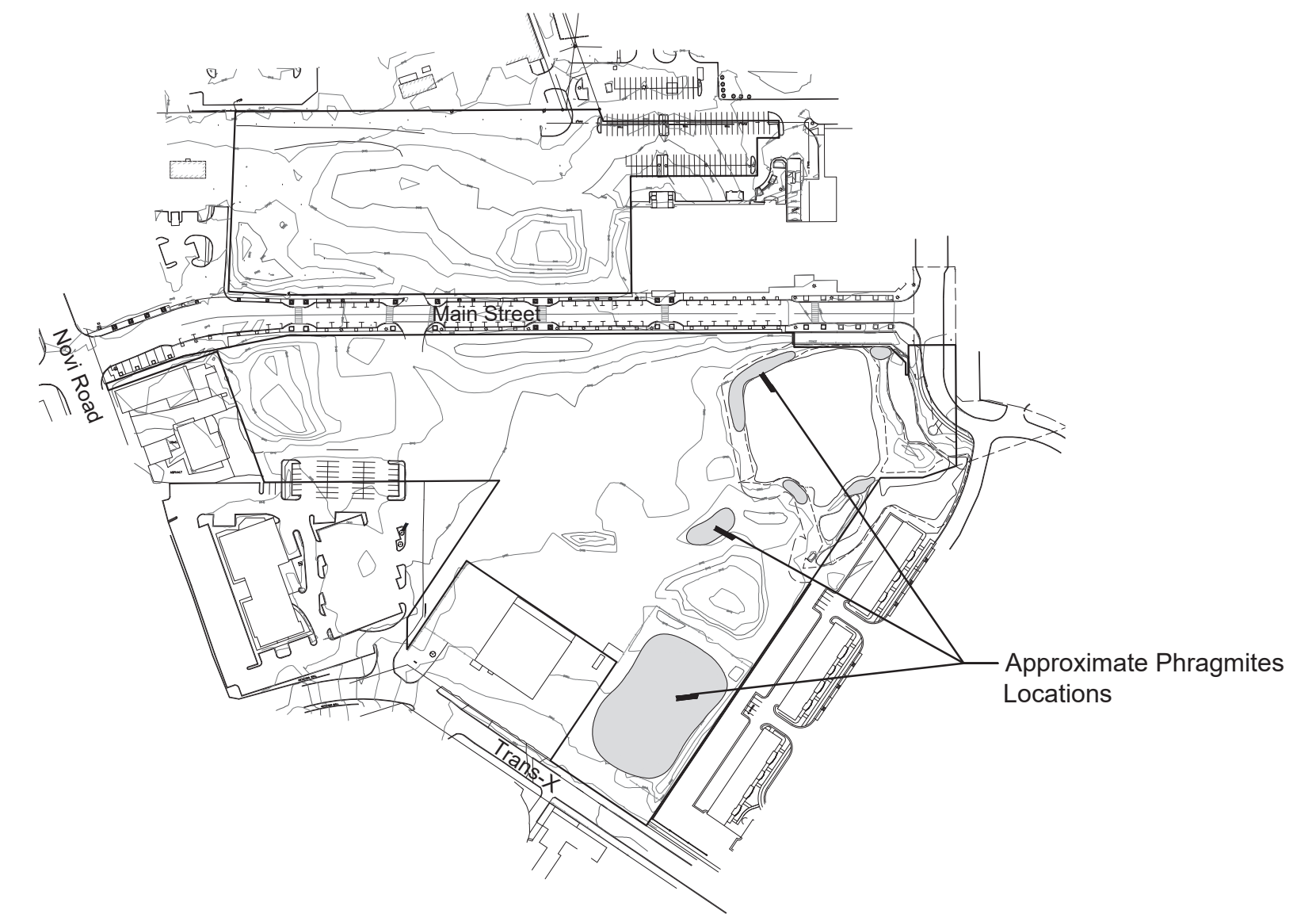
Sequence of Removal for Phragmites

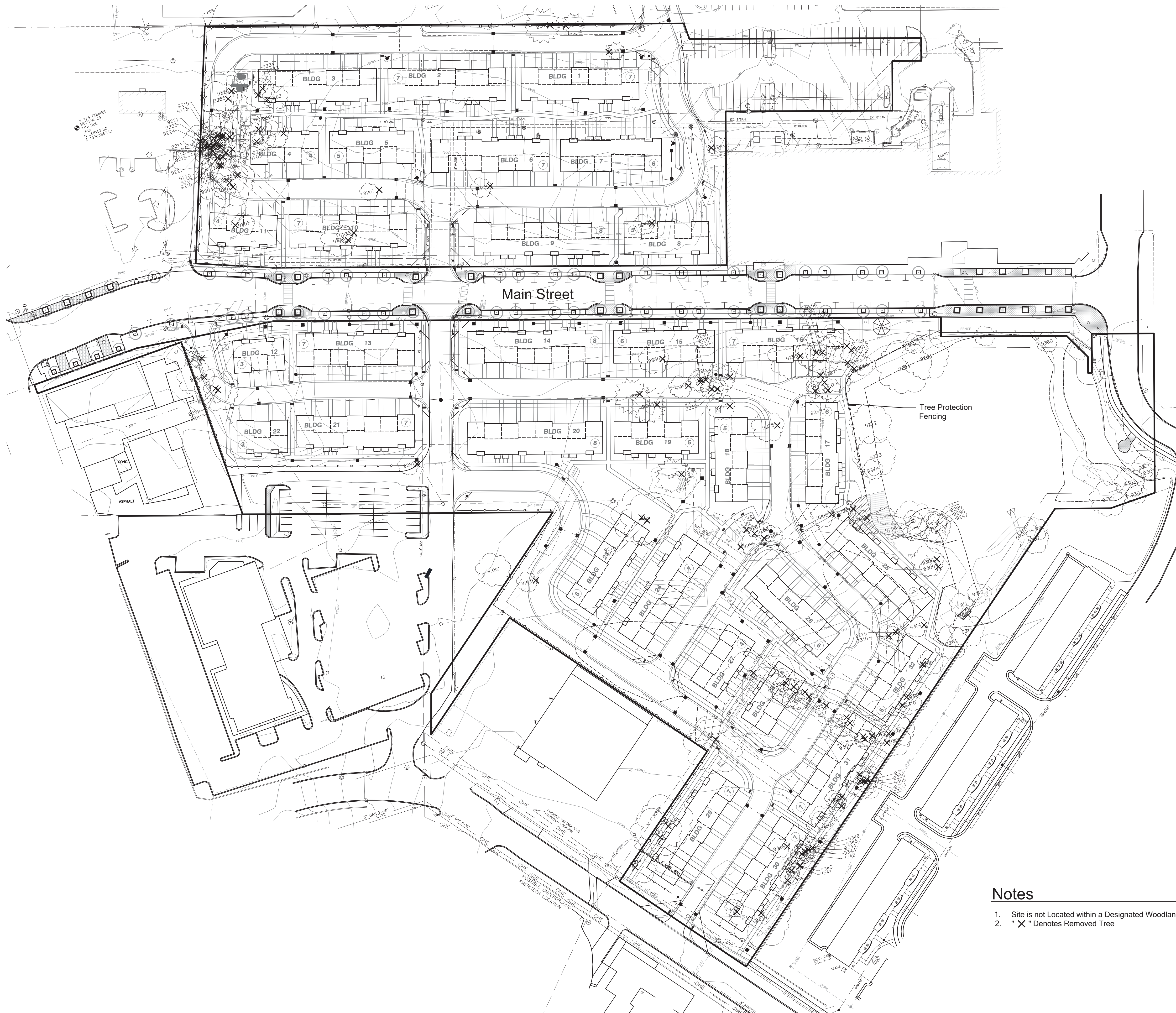
- Phragmites should be treated in early to late summer (June-September) using glyphosate, or late summer (August-September) using glyphosate to achieve effective control.
- Application of herbicides should be hand swiping for scattered plants and hand spraying for denser stands. The use of a licensed or certified applicator is required to minimize damage to native plant material.
- After two weeks of herbicide application, the dead stalks should be cut and removed to encourage native plant material growth. If a mechanical method is used, equipment should be cleaned to prevent the spread of seed.

Second Year Maintenance

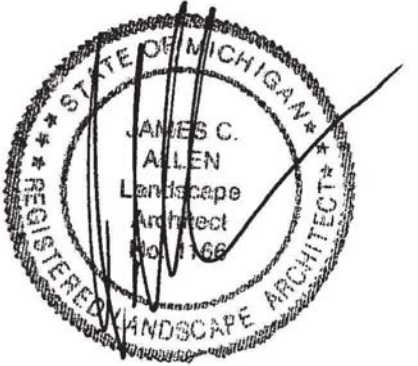
- A visual inspection will be made during June - July. If phragmites is present, steps 1-3 above will be repeated.

Existing Phragmites Locations





Seal: _____



Title: _____

Existing Vegetation Plan

Project: _____

**The Townes at Main Street
 Novi, Michigan**

Prepared for: _____

Singh Development, LLC
 7125 Orchard Lake Road, Suite 200
 West Bloomfield, Michigan 48322
 248.865.1614

Revision: _____ Issued: _____

Submission	April 8, 2021
Revised	November 15, 2021
Revised	March 8, 2022

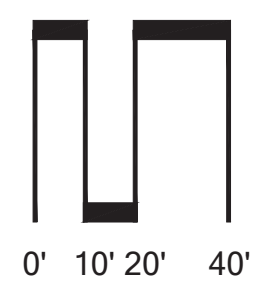
Job Number: _____

21-023

Drawn By: _____ Checked By: _____

jca

jca



Notes

1. Site is not Located within a Designated Woodland
2. " X " Denotes Removed Tree



Sheet No. _____

Tree List

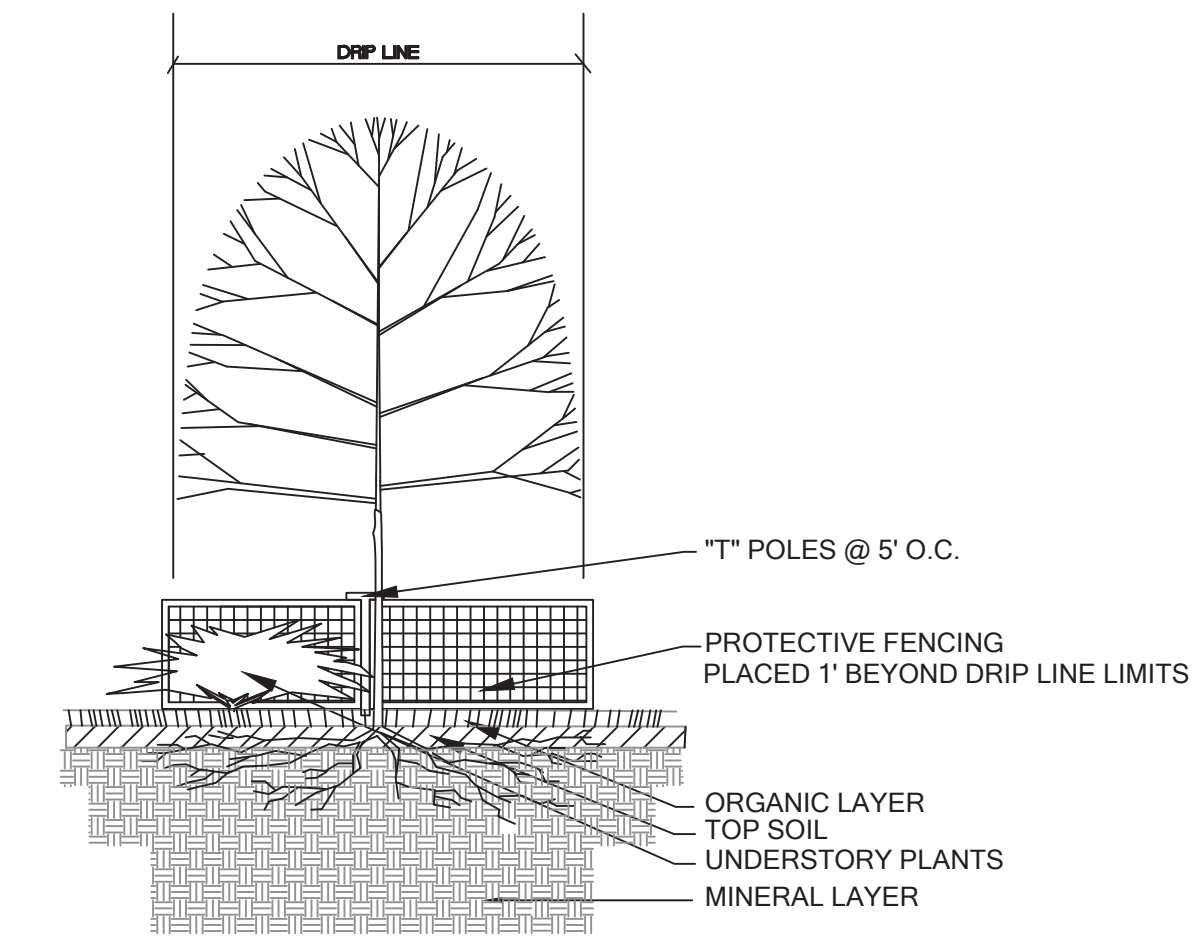
TAG #	SCIENTIFIC NAME	COMMON NAME	DBH	Multi Note	CONDITION	STATUS	REPLACEMENT
9201	<i>Juglans nigra</i>	BLACK WALNUT	10"		GOOD	Remove	0
9202	<i>Ulmus spp.</i>	ELM	10"		GOOD	Remove	0
9203	<i>Ulmus spp.</i>	ELM	25"		GOOD	Remove	0
9204	<i>Ulmus spp.</i>	ELM	16"		GOOD	Remove	0
9205	<i>Acer negundo</i>	BOX ELDER	15"		GOOD	Remove	0
9206	<i>Robinia pseudoacacia</i>	BLACK LOCUST	13"	TWIN	GOOD	Remove	0
9207	<i>Robinia pseudoacacia</i>	BLACK LOCUST	22"		GOOD	Remove	0
9208	<i>Robinia pseudoacacia</i>	BLACK LOCUST	12", 16"	TWIN	GOOD	Remove	0
9209	<i>Robinia pseudoacacia</i>	BLACK LOCUST	15"		GOOD	Remove	0
9210	<i>Ulmus spp.</i>	ELM	3", 9"	TWIN	GOOD	Remove	0
9211	<i>Robinia pseudoacacia</i>	BLACK LOCUST	9"		GOOD	Remove	0
9212	<i>Robinia pseudoacacia</i>	BLACK LOCUST	11"		GOOD	Remove	0
9213	<i>Robinia pseudoacacia</i>	BLACK LOCUST	11"		GOOD	Remove	0
9214	<i>Robinia pseudoacacia</i>	BLACK LOCUST	10"		GOOD	Remove	0
9215	<i>Robinia pseudoacacia</i>	BLACK LOCUST	13"		GOOD	Remove	0
9216	<i>Acer negundo</i>	BOX ELDER	10"	TWIN	FAIR	Remove	0
9217	<i>Robinia pseudoacacia</i>	BLACK LOCUST	18", 20"	TWIN	GOOD	Remove	0
9218	<i>Robinia pseudoacacia</i>	BLACK LOCUST	9"		GOOD	Remove	0
9219	<i>Robinia pseudoacacia</i>	BLACK LOCUST	12"		GOOD	Remove	0
9220	<i>Robinia pseudoacacia</i>	BLACK LOCUST	11"		GOOD	Remove	0
9221	<i>Robinia pseudoacacia</i>	BLACK LOCUST	9"		GOOD	Remove	0
9222	<i>Robinia pseudoacacia</i>	BLACK LOCUST	12"		GOOD	Remove	0
9223	<i>Robinia pseudoacacia</i>	BLACK LOCUST	10"	TWIN	GOOD	Remove	0
9224	<i>Robinia pseudoacacia</i>	BLACK LOCUST	12", 14"	TWIN	GOOD	Remove	0
9225	<i>Populus deltoides</i>	COTTONWOOD	16"		GOOD	Remove	0
9226	<i>Morus spp.</i>	MULBERRY	18"		GOOD	Remove	0
9227	<i>Acer negundo</i>	BOX ELDER	18"		FAIR	Remove	0
9228	<i>Acer negundo</i>	BOX ELDER	11"		GOOD	Remove	0
9229	<i>Acer negundo</i>	BOX ELDER	4", 13"	TWIN	GOOD	Remove	0
9230	<i>Populus deltoides</i>	COTTONWOOD	10"		GOOD	Remove	0
9231	<i>Populus deltoides</i>	COTTONWOOD	12"		GOOD	Remove	0
9232	<i>Populus deltoides</i>	COTTONWOOD	11"		GOOD	Remove	0
9233	<i>Populus deltoides</i>	COTTONWOOD	9"		GOOD	Remove	0
9234	<i>Populus deltoides</i>	COTTONWOOD	13"		GOOD	Remove	0
9235	<i>Thuja spp.</i>	CEDAR	8"		GOOD	Remove	0
9236	<i>Populus deltoides</i>	COTTONWOOD	15"		GOOD	Remove	0
9237	<i>Ulmus spp.</i>	ELM	8"		GOOD	Remove	0
9238	<i>Ulmus spp.</i>	ELM	9"		GOOD	Remove	0
9239	<i>Pinus nigra</i>	AUSTRIAN PINE	16"		GOOD	Remove	0
9240	<i>Pinus nigra</i>	AUSTRIAN PINE	10"		GOOD	Remove	0
9241	<i>Picea pungens</i>	COLORADO SPRUCE	8"		GOOD	Remove	0
9242	<i>Ulmus spp.</i>	ELM	6", 9"	TWIN	GOOD	Remove	0
9243	<i>Ulmus spp.</i>	ELM	9"		GOOD	Remove	0
9244	<i>Thuja spp.</i>	CEDAR	16"		GOOD	Remove	0
9245	<i>Pinus sylvestris</i>	SCOTCH PINE	16"		GOOD	Remove	0
9246	<i>Ulmus spp.</i>	ELM	13"		GOOD	Remove	0
9247	<i>Populus deltoides</i>	COTTONWOOD	10"		GOOD	Remove	0
9248	<i>Populus deltoides</i>	COTTONWOOD	10"		GOOD	Remove	0
9249	<i>Populus deltoides</i>	COTTONWOOD	10"		GOOD	Remove	0
9250	<i>Populus deltoides</i>	COTTONWOOD	9"		GOOD	Remove	0
9251	<i>Populus deltoides</i>	COTTONWOOD	10"		GOOD	Remove	0
9252	<i>Populus deltoides</i>	COTTONWOOD	9"	TWIN	GOOD	Remove	0
9253	<i>Acer negundo</i>	BOX ELDER	7", 12"	TWIN	POOR	Remove	0
9254	<i>Populus deltoides</i>	COTTONWOOD	12"		GOOD	Remove	0
9255	<i>Populus deltoides</i>	COTTONWOOD	20"		GOOD	Remove	0
9256	<i>Populus deltoides</i>	COTTONWOOD	9"		GOOD	Remove	0
9257	<i>Populus deltoides</i>	COTTONWOOD	17"		GOOD	Remove	0
9258	<i>Populus deltoides</i>	COTTONWOOD	19"		GOOD	Remove	0
9259	<i>Populus deltoides</i>	COTTONWOOD	9"		GOOD	Remove	0
9260	<i>Populus deltoides</i>	COTTONWOOD	15"		GOOD	Save	0
9261	<i>Thuja spp.</i>	CEDAR	8"		GOOD	Save	0
9262	<i>Juglans nigra</i>	BLACK WALNUT	9"		GOOD	Save	0
9263	<i>Populus deltoides</i>	COTTONWOOD	20"		GOOD	Save	0
9264	<i>Populus deltoides</i>	COTTONWOOD	24"		GOOD	Save	0
9265	<i>Juglans nigra</i>	BLACK WALNUT	9"		GOOD	Remove	0
9266	<i>Juglans nigra</i>	BLACK WALNUT	9"		GOOD	Remove	0
9267	<i>Populus deltoides</i>	COTTONWOOD	14"-18"	MULTI (5)	GOOD	Remove	0
9268	<i>Populus deltoides</i>	COTTONWOOD	15"		GOOD	Remove	0
9269	<i>Salix spp.</i>	WILLOW	7", 9", 10"	TRI	GOOD	Remove	0
9270	<i>Ulmus spp.</i>	ELM	8"		GOOD	Remove	0
9271	<i>Acer spp.</i>	MAPLE	8"		POOR	Remove	0
9272	<i>Salix spp.</i>	WILLOW	18"		POOR	Save	0
9273	<i>Salix spp.</i>	WILLOW	18"		POOR	Save	0
9274	<i>Ulmus spp.</i>	ELM	9"		GOOD	Save	0
9275	<i>Robinia pseudoacacia</i>	BLACK LOCUST	14"		GOOD	Remove	0
9276	<i>Pinus sylvestris</i>	SCOTCH PINE	16"		GOOD	Remove	0
9277	<i>Populus deltoides</i>	COTTONWOOD	12", 16", 23"	TRI	GOOD	Remove	0
9278	<i>Populus deltoides</i>	COTTONWOOD	26"		GOOD	Remove	0
9279	<i>Populus deltoides</i>	COTTONWOOD	9"		GOOD	Remove	0
9280	<i>Populus deltoides</i>	COTTONWOOD	15"		GOOD	Remove	0
9281	<i>Populus deltoides</i>	COTTONWOOD	9"		GOOD	Remove	0
9282	<i>Populus deltoides</i>	COTTONWOOD	12"		GOOD	Remove	0
9283	<i>Populus deltoides</i>	COTTONWOOD	19"		GOOD	Remove	0
9284	<i>Robinia pseudoacacia</i>	BLACK LOCUST	16"		GOOD	Remove	0
9285	<i>Picea pungens</i>	COLORADO SPRUCE	8"		GOOD	Remove	0

TAG #	SCIENTIFIC NAME	COMMON NAME	DBH	Multi Note	CONDITION	STATUS	REPLACEMENT
9286	<i>Populus deltoides</i>	COTTONWOOD	9"		GOOD	Remove	0
9287	<i>Populus deltoides</i>	COTTONWOOD	8"		GOOD	Remove	0
9288	<i>Populus deltoides</i>	COTTONWOOD	8"		GOOD	Remove	0
9289	<i>Populus deltoides</i>	COTTONWOOD	9"		GOOD	Remove	0
9290	<i>Populus deltoides</i>	COTTONWOOD	10"		GOOD	Remove	0
9291	<i>Populus deltoides</i>	COTTONWOOD	10"		GOOD	Remove	0
9292	<i>Populus deltoides</i>	COTTONWOOD	9"		GOOD	Remove	0
9293	<i>Acer spp.</i>	MAPLE	8"		GOOD	Remove	0
9294	<i>Populus deltoides</i>	COTTONWOOD	9"		GOOD	Save	0
9295	<i>Populus deltoides</i>	COTTONWOOD	18"		GOOD	Save	0
9296	<i>Juglans nigra</i>	BLACK WALNUT	8"		GOOD	Save	0
9297	<i>Populus deltoides</i>	COTTONWOOD	9"		GOOD	Save	0
9298	<i>Populus deltoides</i>	COTTONWOOD	14"		GOOD	Save	0
9299	<i>Populus deltoides</i>	COTTONWOOD	9"		GOOD	Save	0
9300	<i>Populus deltoides</i>	COTTONWOOD	9"		GOOD	Save	0
9301	<i>Ulmus spp.</i>	ELM	10"	TWIN	GOOD	Save	0
9302	<i>Ulmus spp.</i>	ELM	13"		GOOD	Save	0
9303	<i>Ulmus spp.</i>	ELM	9"		GOOD	Save	0
9304	<i>Acer negundo</i>	BOX ELDER	8"		GOOD	Save	0
9305	<i>Populus deltoides</i>	COTTONWOOD	16"		GOOD	Save	0
9306	<i>Salix spp.</i>	WILLOW	10"		GOOD	Save	0
9307	<i>Salix spp.</i>	WILLOW	13"		GOOD	Save	0
9308	<i>Populus spp.</i>	POPLAR	14"		GOOD	Remove	0
9309	<i>Populus deltoides</i>	COTTONWOOD	8"		GOOD	Remove	0
9310	<i>Populus deltoides</i>	COTTONWOOD	9"		GOOD	Save	0
9311	<i>Populus deltoides</i>	COTTONWOOD	10"		GOOD	Save	0
9312	<i>Populus deltoides</i>	COTTONWOOD	15"		GOOD	Save	0
9313	<i>Populus deltoides</i>	COTTONWOOD	15"	TWIN	GOOD	Save	0
9314	<i>Populus deltoides</i>	COTTONWOOD	10"		GOOD	Remove	0
9315	<i>Populus deltoides</i>	COTTONWOOD	8"		GOOD	Remove	0
9316	<i>Populus deltoides</i>	COTTONWOOD	10"		GOOD	Remove	0
9317	<i>Populus deltoides</i>	COTTONWOOD	11"		GOOD	Remove	0
9318	<i>Populus deltoides</i>	COTTONWOOD	14"		GOOD	Remove	0
9319	<i>Populus deltoides</i>	COTTONWOOD	10"		GOOD	Remove	0
9320	<i>Populus deltoides</i>	COTTONWOOD	7", 9", 14"	TRI	GOOD	Remove	0
9321	<i>Populus deltoides</i>	COTTONWOOD	14"	QUAD	GOOD	Remove	0
9322	<i>Populus deltoides</i>	COTTONWOOD	9"		GOOD	Remove	0
9323	<i>Juglans nigra</i>	BLACK WALNUT	10"		GOOD	Remove	0
9324	<i>Populus deltoides</i>	COTTONWOOD	16"		GOOD	Remove	0
9325	<i>Acer negundo</i>	BOX ELDER	9"		GOOD	Remove	0
9326	<i>Acer negundo</i>	BOX ELDER	9"		GOOD	Remove	0
9327	<i>Populus deltoides</i>	COTTONWOOD	14"	TWIN	GOOD	Remove	0
9328	<i>Populus deltoides</i>	COTTONWOOD	12"		GOOD	Remove	0
9329	<i>Acer negundo</i>	BOX ELDER	10"		POOR	Remove	0
9330	<i>Populus deltoides</i>	COTTONWOOD	5", 24"	TWIN	GOOD	Remove	0
9331	<i>Populus deltoides</i>	COTTONWOOD	20", 25"	TWIN	GOOD	Remove	0
9332	<i>Populus deltoides</i>	COTTONWOOD	24"		GOOD	Remove	0
9333	<i>Populus deltoides</i>	COTTONWOOD	22"		GOOD	Remove	0
9334	<i>Populus deltoides</i>	COTTONWOOD	20"		GOOD	Remove	0
9335	<i>Acer negundo</i>	BOX ELDER	8"	TWIN	FAIR	Remove	0
9336	<i>Salix spp.</i>	WILLOW	15", 26"	TWIN	FAIR	Remove	0
9337	<i>Acer negundo</i>	BOX ELDER	8", 10", 12", 14"	QUAD	GOOD	Remove	0
9338	<i>Ulmus spp.</i>	ELM	9"		GOOD	Remove	0
9339	<i>Acer negundo</i>	BOX ELDER	9"	QUAD	GOOD	Remove	0
9340	<i>Acer negundo</i>	BOX ELDER	9", 13"	TWIN	FAIR	Remove	0
9341	<i>Acer negundo</i>	BOX ELDER	12"		GOOD	Remove	0
9342	<i>Acer negundo</i>	BOX ELDER	9"		GOOD	Remove	0
9343	<i>Acer negundo</i>	BOX ELDER	8"		GOOD	Remove	0
9344	<i>Acer negundo</i>	BOX ELDER	8"	TWIN	GOOD	Remove	0
9345	<i>Acer negundo</i>	BOX ELDER	11"		GOOD	Remove	0
9346	<i>Acer negundo</i>	BOX ELDER	7"-10"	MULTI (5)	GOOD	Remove	0
9347	<i>Acer negundo</i>	BOX ELDER	10", 14"	TWIN	GOOD	Remove	0
9348	<i>Populus deltoides</i>	COTTONWOOD	9"		GOOD	Remove	0
9349	<i>Acer negundo</i>	BOX ELDER	9", 11", 13", 14"	QUAD	GOOD	Remove	0
9350	<i>Acer negundo</i>	BOX ELDER	3"-10"	MULTI (6)	GOOD	Remove	0
9351	<i>Acer negundo</i>	BOX ELDER	8"		GOOD	Remove	0
9352	<i>Acer negundo</i>	BOX ELDER	8"		POOR	Remove	0
9353	<i>Salix spp.</i>	WILLOW	9", 10", 14"	TRI	GOOD	Remove	0
9354	<i>Acer negundo</i>	BOX ELDER	9"		GOOD	Remove	0
9355	<i>Acer negundo</i>	BOX ELDER	8"		GOOD	Remove	0
9356	<i>Robinia pseudoacacia</i>	BLACK LOCUST	9", 10"	TWIN	GOOD	Remove	0
9357	<i>Robinia pseudoacacia</i>	BLACK LOCUST	13", 16", 16"	TRI	GOOD	Remove	0
9358	<i>Acer negundo</i>	BOX ELDER	8"		GOOD	Remove	0
9359	<i>Acer negundo</i>	BOX ELDER	8"		GOOD	Remove	0
9360	<i>Juglans nigra</i>	BLACK WALNUT	9"		GOOD	Remove	0
9361	<i>Salix spp.</i>	WILLOW	9"		GOOD	Remove	0

Tree Survey Provided by The Umlor Group

Tree Summary

Total Trees	161 Trees
Less Non - Regulated Trees:	
Non-Regulated Trees	161 Trees
Net Regulated Trees	0 Regulated Trees
Regulated Trees Removed	0 Trees
Replacement Required	0 Trees
(Site is Located Outside of a Regulated Woodland)	

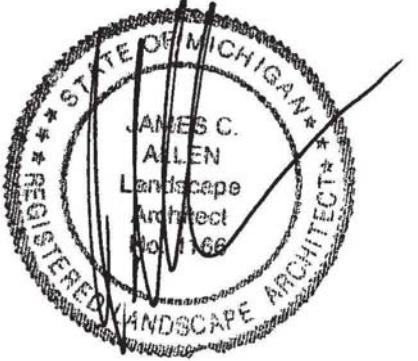


1. Either Plastic or Wood Orange Snow Fencing Shall be Installed at or Beyond the Dripline, Unless More Substantial Fencing is Required.
2. Stakes Shall be Metal T" Poles Spaced no Further than 5' on Center.
3. Fencing Shall not be Installed Closer to the Tree than the Dripline of Those Trees to be Saved. Special Circumstances Shall be Reviewed by the City.
4. Fencing Shall be Erected Prior to Construction. The City Shall be Notified Once the Fencing is Installed for Inspection.
5. Under no Circumstances Shall the Protective Fencing be Removed Without Proper Approval from the City.
6. No Person Shall Conduct any Activity Within Areas Proposed to Remain. This Shall Include, but not Limited to:
 - a. No Solvents or Chemicals Within Protected Areas.
 - b. No Building Materials or Construction Equipment Within Protected Areas.
 - c. No Grade Changes, Including Fill, Within Protected Areas.
 - d. No Removal of Vegetation from the Ground Up Without Permission from the Proper Reviewing Authority, Including the Woodlands Review Board.
 - e. Any Required Swale Needs to be Directed Around the Protected Areas. Instances Where Swales are Approved Through a Protected Area, the Swales Need to be HAND DUG. Machinery of Any Kind is Prohibited.
7. Regulated Woodland or Regulated Trees Adjacent to the Property are Also Required to be Protected Whether or not they are Shown on the Plan.

Tree Protection Detail

NO SCALE

Seal: _____



Title: _____

Existing Vegetation List

Project: _____

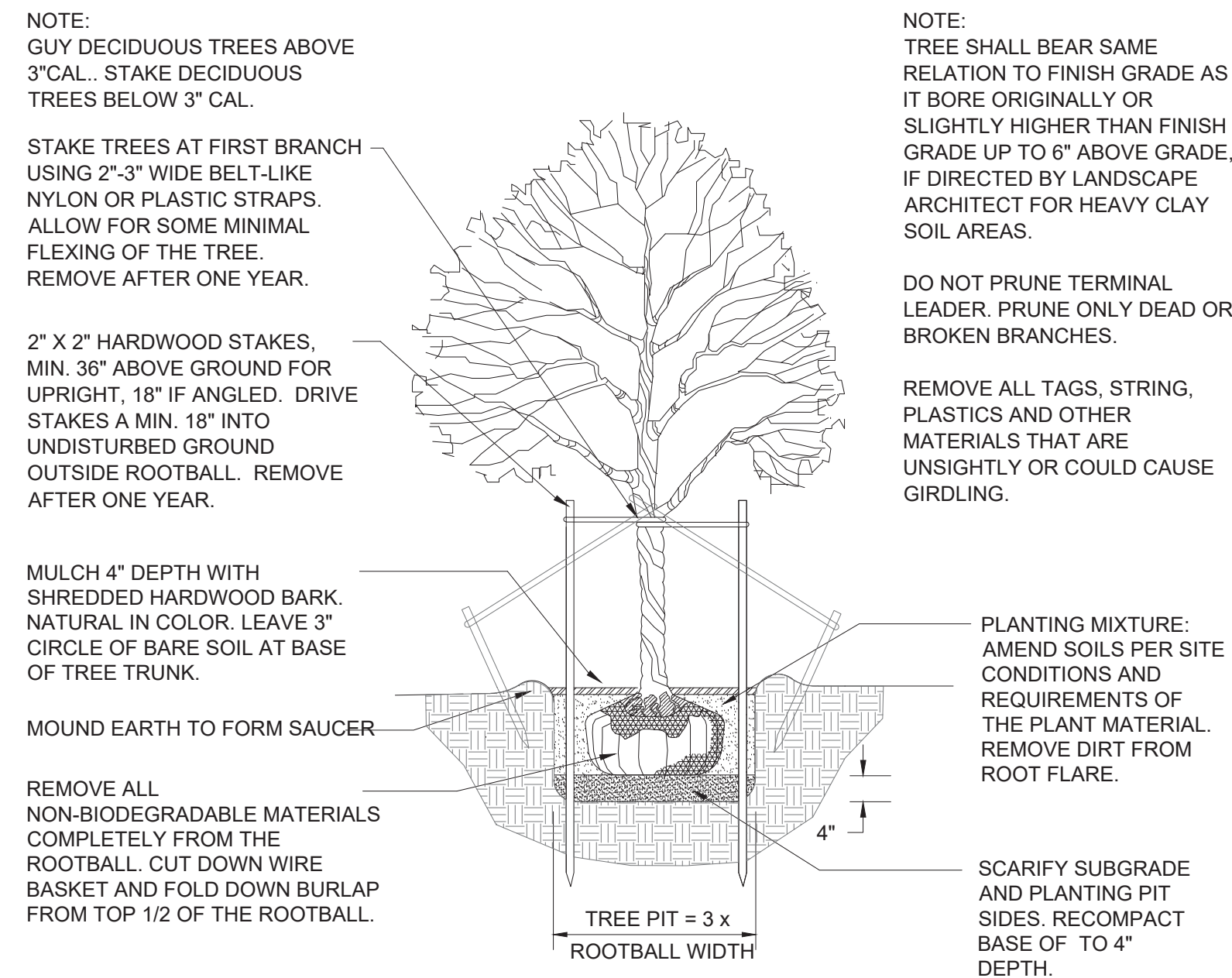
The Townes at Main Street
Novi, Michigan

Prepared for: _____

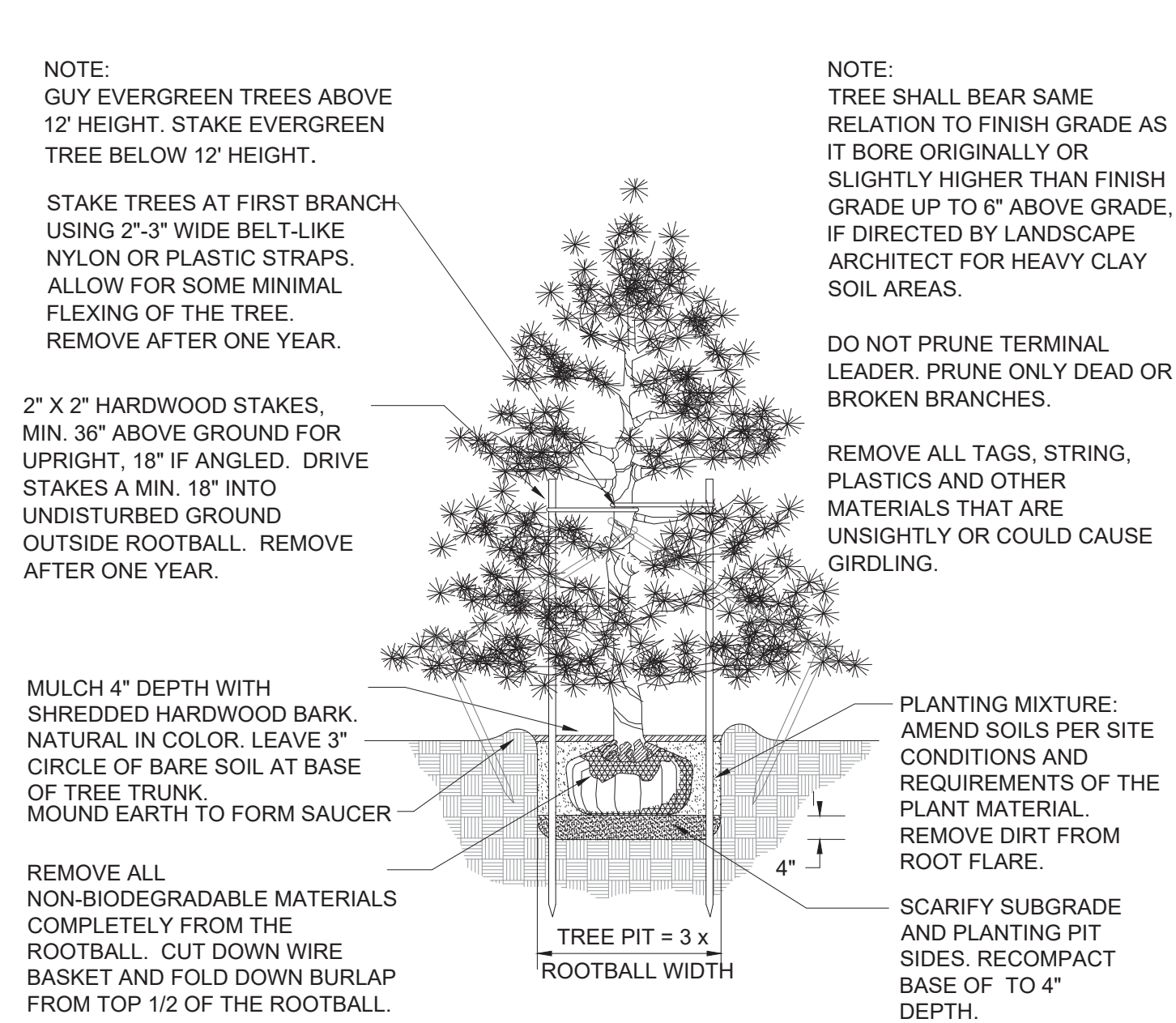
Singh Development, LLC
7125 Orchard Lake Road, Suite 200
West Bloomfield, Michigan 48322
248.865.1614

Revision: _____ Issued: _____

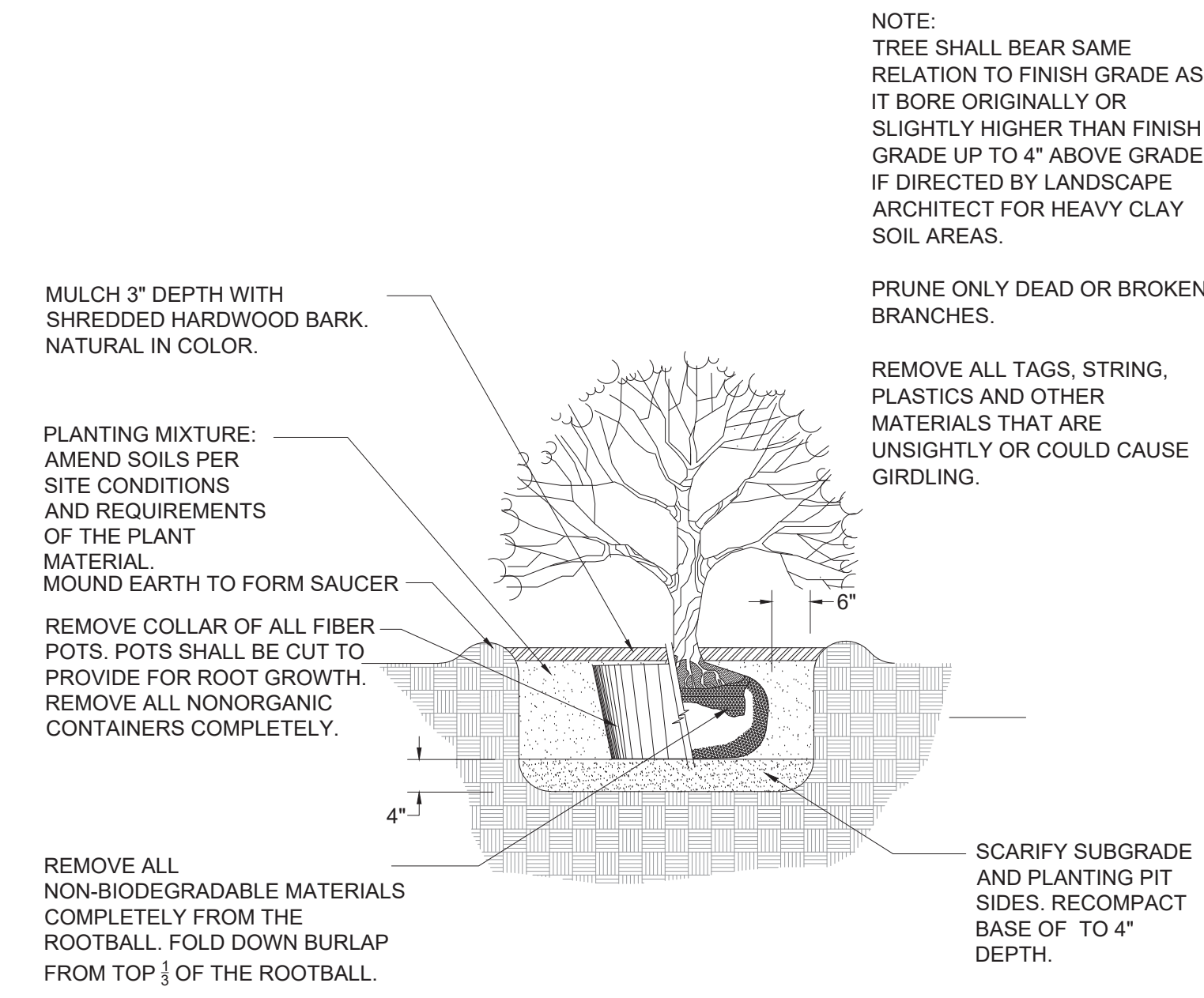
Submitted	April 8, 2021
Revised	November 15, 2021
Revised	March 8, 2022



DECIDUOUS TREE PLANTING DETAIL



EVERGREEN TREE PLANTING DETAIL



SHRUB PLANTING DETAIL

NOT TO SCALE

Seal:



Title:

Landscape Details

Project:

The Townes at Main Street
 Novi, Michigan

Prepared for:

Singh Development, LLC
 7125 Orchard Lake Road, Suite 200
 West Bloomfield, Michigan 48322
 248.865.1614

Revision: Issued:

Submission	April 8, 2021
Revised	November 15, 2021
Revised	March 8, 2022

Job Number:

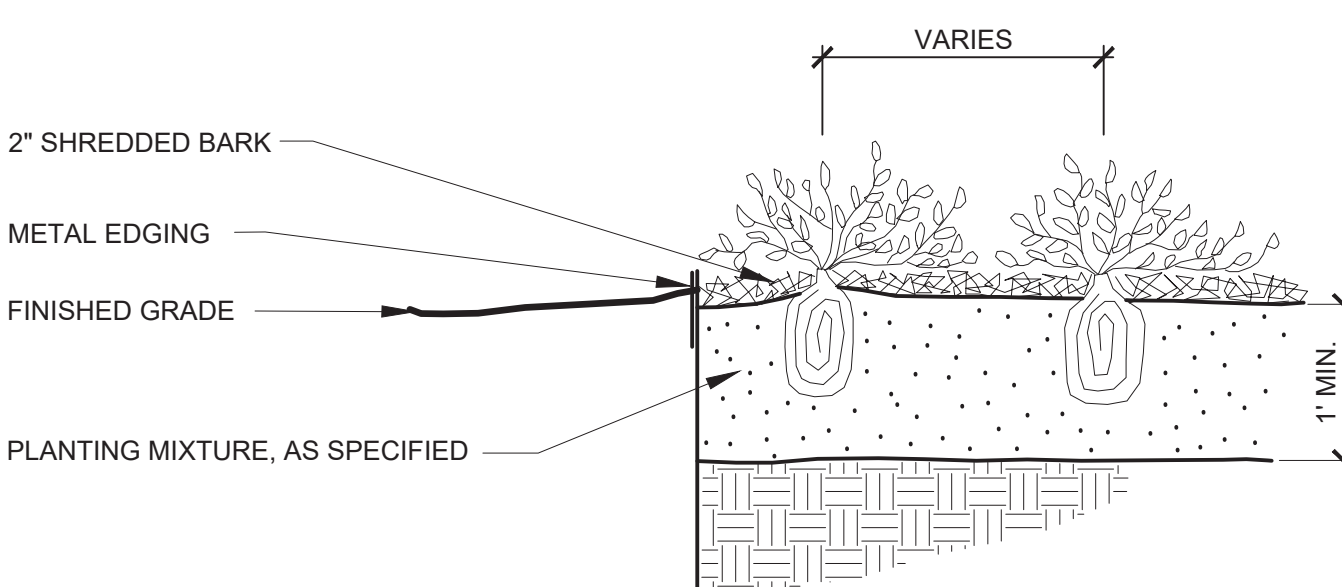
21-023

Drawn By: Checked By:

jca jca

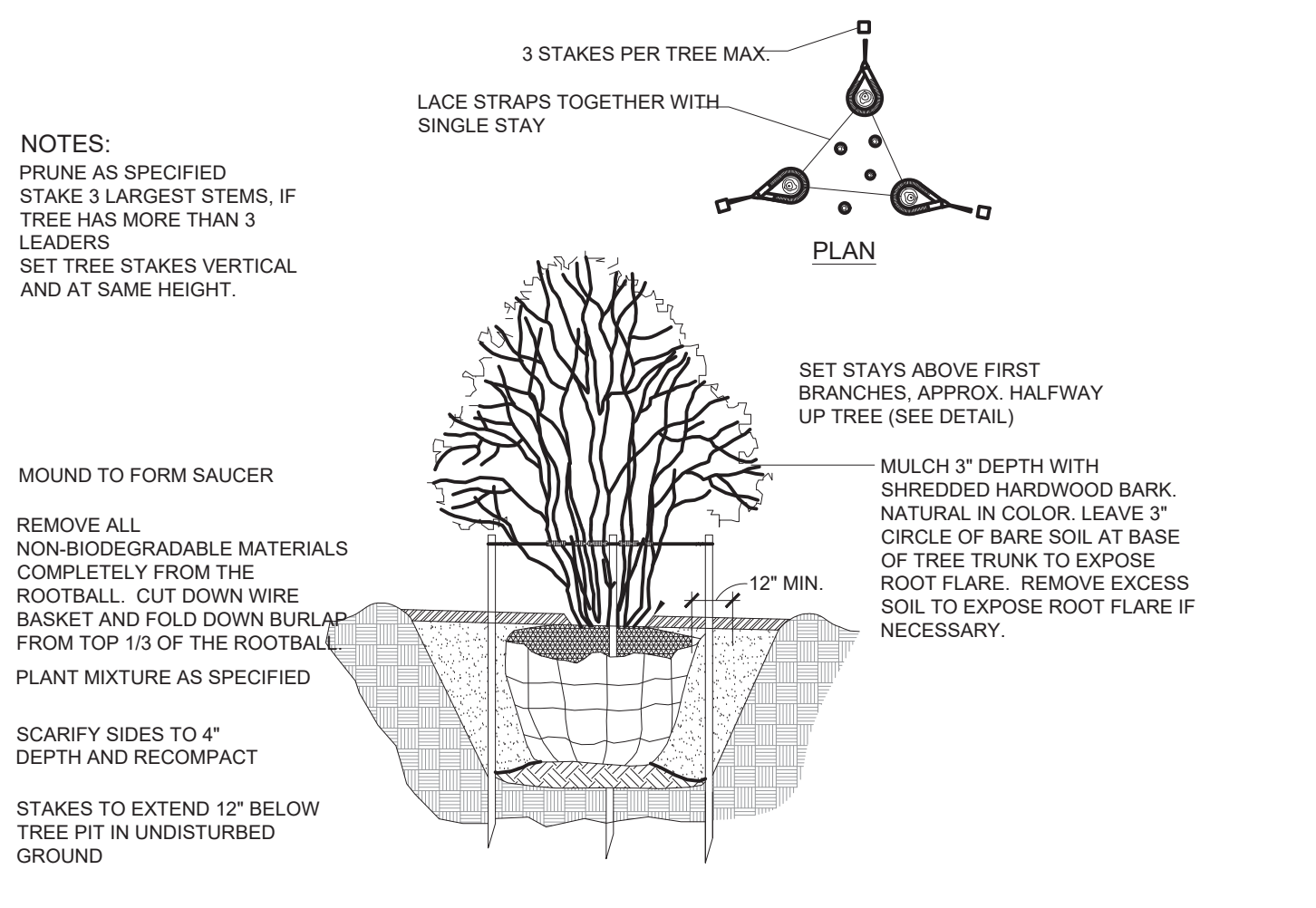
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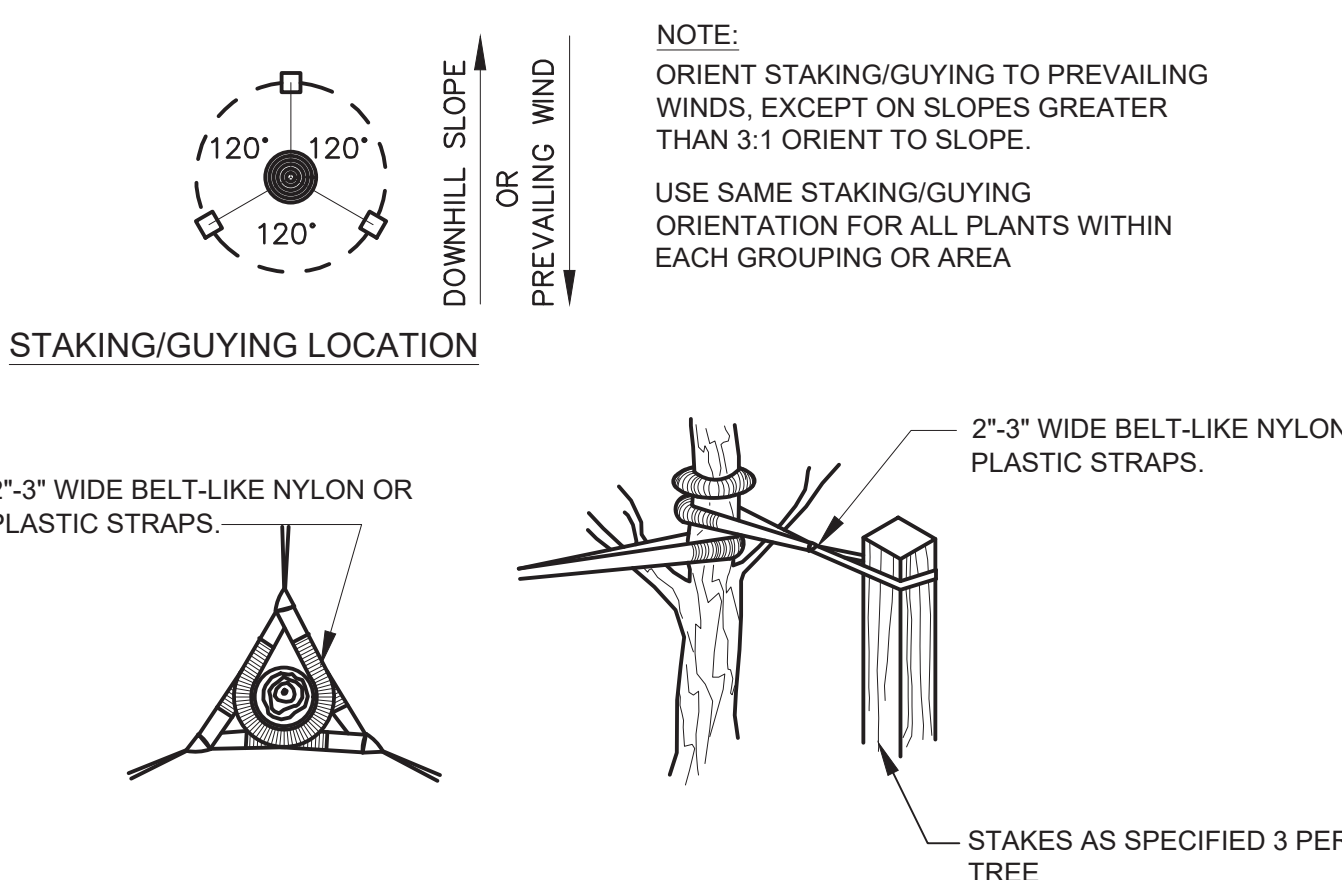
PERENNIAL PLANTING DETAIL

Not to scale



MULTI-STEM TREE PLANTING DETAIL

NOT TO SCALE

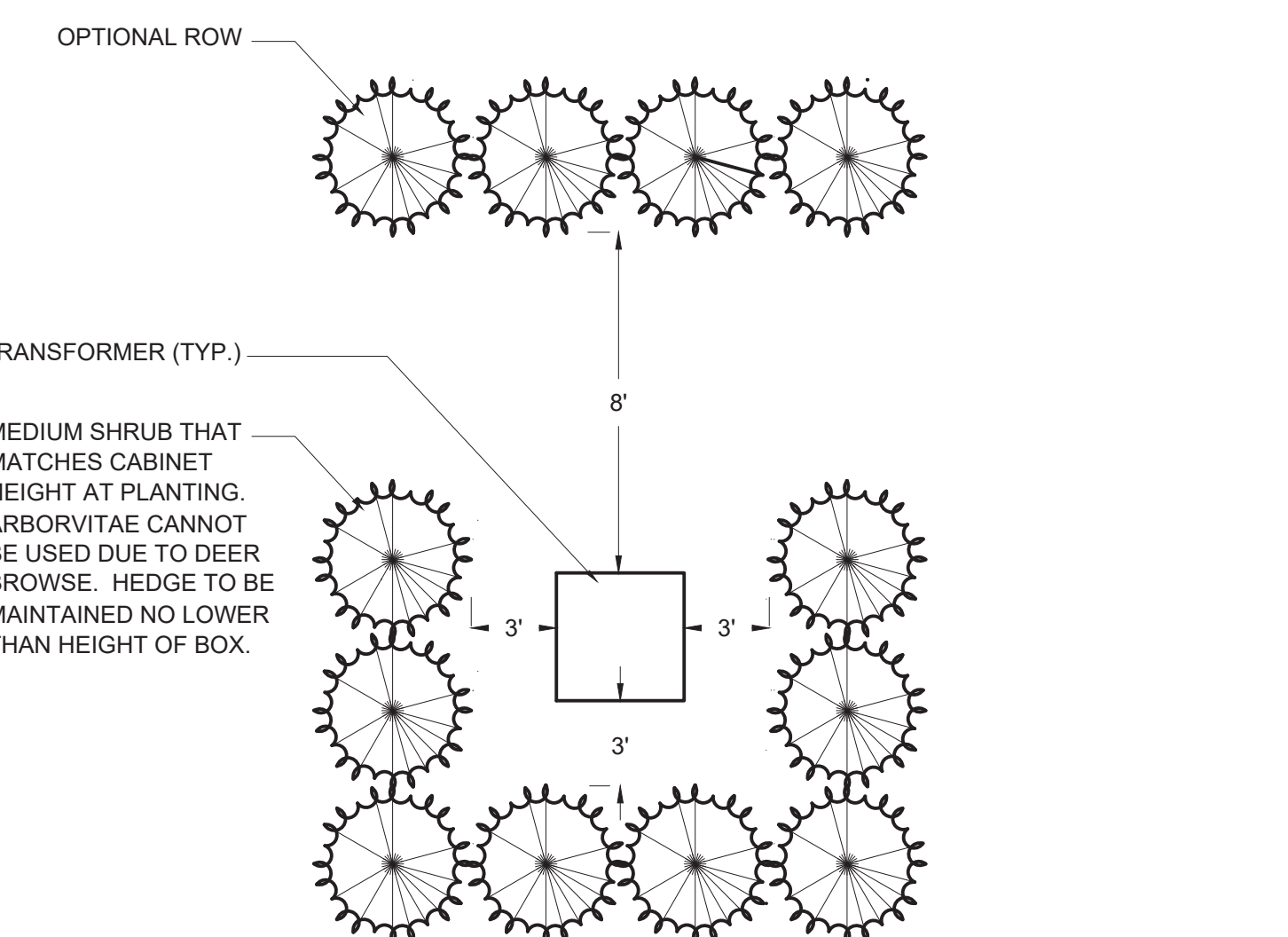


GUYING DETAIL

STAKING DETAIL

TREE STAKING DETAIL

Not to scale



TRANSFORMER SCREENING DETAIL

Not to scale

LANDSCAPE NOTES

- All plants shall be north Midwest American region grown, No. 1 grade plant materials, and shall be true to name, free from physical damage and wind burn.
- Plants shall be full, well-branched, and in healthy vigorous growing condition.
- Plants shall be watered before and after planting is complete.
- All trees must be staked, fertilized and mulched and shall be guaranteed to exhibit a normal growth cycle for at least two (2) full years following City approval.
- All material shall conform to the guidelines established in the most recent edition of the American Standard for Nursery Stock.
- Provide clean backfill soil, using material stockpiled on site. Soil shall be screened and free of any debris, foreign material, and stone.
- "Agriform" tabs or similar slow-release fertilizer shall be added to the planting pits before being backfilled.
- Amended planting mix shall consist of 1/3 screened topsoil, 1/3 sand and 1/3 compost, mixed well and spread to the depth as indicated in planting details.
- All plantings shall be mulched per planting details located on this sheet.
- The Landscape Contractor shall be responsible for all work shown on the landscape drawings and specifications.
- No substitutions or changes of location, or plant types shall be made without the approval of the Landscape Architect.
- The City of Novi's Landscape Architect shall be notified in writing of any discrepancies between the plans and field conditions prior to installation.
- The Landscape Contractor shall be responsible for maintaining all plant material in a vertical condition throughout the guaranteed period.
- The Landscape Architect shall have the right, at any stage of the installation, to reject any work or material that does not meet the requirements of the plans and specifications, if requested by owner.
- Contractor shall be responsible for checking plant quantities to ensure quantities on drawings and plant list are the same. In the event of a discrepancy, the quantities on the plans shall prevail.
- The Landscape Contractor shall seed and mulch or sod (as indicated on plans) all areas disturbed during construction, throughout the contract limits.
- A pre-emergent weed control agent, "Preen" or equal, shall be applied uniformly on top of all mulching in all planting beds.
- All landscape areas shall be provided with an underground automatic sprinkler system.
- Sod shall be two year old "Baron/Cheriadelpi" Kentucky Blue Grass grown in a sod nursery on loam soil.

CITY OF NOVI NOTES

- All landscape islands shall be backfilled with a sand mixture to facilitate drainage.
- All proposed landscape islands shall be curbed.
- All landscape areas shall be irrigated.
- Overhead utility lines and poles to be relocated as directed by utility company of record.
- Evergreen and canopy trees shall be planted a minimum of 10' from a fire hydrant, and manhole, 15' from overhead wires.
- All plant material shall be guaranteed for two (2) years after City Approval and shall be installed and maintained according to City of Novi standards. Replace Failing Material within 3 Months of Discovering the Need for Replacement. One cultivation per month shall occur in June-August.
- All proposed street trees shall be planted a minimum of 4' from both the back of curb and proposed walks.
- All tree and shrub planting beds shall be mulched with shredded hardwood bark, spread to minimum depth of 4". All lawn area trees shall have a 4' diameter circle of shredded hardwood mulch 3' away from trunk. All perennial, annual and ground cover beds shall receive 2" of dark colored bark mulch as indicated on the plant list. Mulch is to be free from debris and foreign material, and shall contain no pieces of inconsistent size.
- All Substitutions or Deviations from the Landscape Plan Must be Approved in Writing by the City of Novi Prior to their Installation.

NOTES:
 THE APPROXIMATE DATE OF INSTALLATION FOR THE PROPOSED LANDSCAPE WILL BE MARCH 15 AND NOVEMBER 15 OF 2022 OR 2023.

THE SITE WILL BE MAINTAINED BY THE DEVELOPER IN ACCORDANCE WITH THE STANDARDS SET FORTH IN THE CITY OF NOVI ZONING ORDINANCE. THIS INCLUDES WEEDING AND WATERING AS REQUIRED BY NORMAL MAINTENANCE PRACTICES.

DEVELOPER SHALL BE RESPONSIBLE FOR REPLACING ANY TREES WITHIN UTILITY EASEMENTS THAT ARE DAMAGED THROUGH NORMAL MAINTENANCE OR REPAIRS.

PLANT MATERIALS SHALL BE GUARANTEED FOR 2 YEARS AND SHALL BE MAINTAINED IN ACCORDANCE WITH CITY ORDINANCES. WARRANTY PERIOD BEGINS AT THE TIME OF CITY APPROVAL. WATERING AS NECESSARY SHALL OCCUR DURING THIS WARRANTY PERIOD.

ANY SUBSTITUTIONS MUST BE SUBMITTED IN WRITING AND APPROVED BY THE CITY.





GDV3
Granville Classic Standard LED3

SPECIFICATIONS

General Description

The Granville Classic Standard LED3 is designed for use with traditional applications fitting 3" post top lenses. The traditional acorn-shaped luminaire, while reminiscent of the 1920s, contains a powerful, sleek mounted Chip-On-Board LED platform with a precision optical system that maintains post spacing while maintaining uniform illumination.

Mechanical Specifications

The luminaire housing shall:
 • Be heavy grade A360 cast aluminum (aluminum with -1% copper)
 • IP55 rated housing, provides enclosure for the electrical module
 • Mount to slip-fitter that will accept 3" high by 2-7/8" to 3-1/8" O.D. pole tenon
 • Provide four uniquely designed stainless steel spring clips, enclosed in a clear polycarbonate sleeve and adjusted by 1/4-20 hex head bolts that securely cradle the prismatic acrylic refractor. The same 1/4-20 bolts also support the decorative ribs and banding assembly. The back shall:
 • Utilize a polyester power coat paint to ensure maximum durability
 • Require multi-stage pre-treating and painting process yields a finish that achieves a color change rating of 8 per ASTM D1654 after over 5000 hours exposure to salt fog chamber (operated per ASTM B117) on standard and RAL finish options
 • RAL 9005/CCC00 paint colors are Super Durable Corrosion Resistant, 80% gloss.

Electrical Specifications

The driver shall meet the following requirements:
 • Certified by UL or CSA for wet locations
 • A factory programmable electronic driver with 0-10V dimming control leads
 • LEDs shall have a minimum of 70 CR and available in 2700K, 3000K, 4000K, and 5000K CCT
 • The electrical system shall be designed to meet ANSI IEEE C62.41.2 and shall offer a 100V/10kA surge protection, full off, as standard with an upgradable 20kV/10kA surge protection, full off with indicator light, option
 • Lumen output can be customized prior to manufacturing by way of PP06x Options
 • The electrical components are mounted on an aluminum plate that is removable with minimum use of tools.

Optical Specifications

The optical system is P96 rated and consists of a precisely molded thermal resistant borosilicate glass refractor and top reflector mounted within the decorative glass optic. The top reflector reflects over 50% of the upward light into the controlling refractor while allowing a soft up-light component to define the traditional acorn shape of the luminaire. The lower refractor uses precisely molded prisms to maximize the pole spacing while maintaining uniform illumination. Two refractors are available, designed for IES type III and V distributions. Lunar Optics shielding is available for symmetric and asymmetric distributions.

Control Options

The control options shall include, but not limited to the following:
 • Three (3) choices of human-usable photocontrol kits specified to match voltage requirements: 120V, 208-277V, or 347V, and colored to match housing finish (480V kit not available).

Certification and Standards

Luminaires shall be UL or CSA listed.
 • Suitable for operation in an ambient temperature up to 40°C / 105°F per UL or CSA certification
 • LM79 compliant
 • Designlight Consortium (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check with the DLC Qualified Products List at www.dclighting.org/DCL to confirm which versions are qualified.

BUY AMERICAN

This product is assembled in the USA and meets the Buy American (h) government procurement requirements under FARs, BRACs and DOT. Please refer to www.buyusa.gov/homeowner/businesses for additional information.

Warranty - 5 Years Limited

Complete warranty terms located at: www.buyusa.gov/homeowner/businesses

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25°C.

GENERATION LIGHTING

8592-12: One Light Outdoor Wall Lantern



Dimensions:

Width: 4 1/4"
Height: 8 1/4"
Weight: 1.4 lbs.
Extends: 5 1/2"
Wire: 6 1/2" (color/Black/White)
Mounting Proc.: Cap Nuts
Connection: Mounted To Box
Bulb Appearance: Clear

Bulbs:

1 - Medium A19 75w Max. 120v - Not included

Features:

- Clear bulb(s) recommended for this fixture
- Easily converts to LED with optional replacement lamps
- Meets Title 24 energy efficiency standards
- Title 24 compliant if used with Joint Appendix (JAB) approved light bulbs listed in the California Energy Commission Appliance database.

Material List:

1 Body - Aluminum - Black
 1 Canopy - Aluminum - Black

Safety Listing:

Safety Listed for Wet Locations
 Safety Listed for Wet Locations

Instruction Sheets:

English (HC-231)
 French (F-309)

Collection: New Castle

Simple Details Create Stylish Outdoor Wall Lantern. Black Finish and Clear Glass.

Simple details create a stylish outdoor lantern. Black finish and clear glass.

Supplied with 6.5-inches of wire

For an eco-friendly lighting design, convert to LED bulbs to offer savings and reduce energy

Designed for damp and wet environments allowing for direct water contact

1-year manufacturer warranty

The sensibly styled proportions and accents of New Castle make it a versatile selection for your home. Clear bulbs are recommended to use for the best aesthetics.

UPC #: 785652859236

Finish: Black (12)

Shade / Glass / Diffuser Details:

Part	Material	Finish	Quantity	Item Number	Length	Width	Height	Diameter	Filter Diameter	Shade Top Length	Shade Top Width	Shade Top Diameter
Panel	Glass	Clear	4	G500052-32	3.3/8	4.5/16						

Backplate / Canopy Details:

Type	Height / Length	Width	Depth	Diameter	Outlet Box Up	Outlet Box Down
Back Plate	2 1/16	4 1/2	2 3/4	4 1/2	2 3/4	5 1/2

Shipping Information:

Package Type	Product #	Quantity	UPC	Length	Width	Height	Cube	Weight	Frt. Class	UPS Shp
Individual	8592-12	1	785652859236	6.75	5.75	9	0.202	1.75	100	Yes
Master Pack		6	10785652859233	18	14.5	9.75	1.473	11.7	100	Yes
NJ Pallet		378		48	40	74.5	82.778	642.6		No

Generation Lighting reserves the right to revise the design of components of any product due to parts availability or change in safety listing standards without assuming any obligation or liability to modify any products previously manufactured and without notice. This literature depicts a product design that is the sole and exclusive property of Generation Lighting. In compliance with U.S. copyright and patent requirements, notification is hereby presented in this form that this literature, or the product it depicts, is not to be copied, altered or used in any manner without the express written consent of or contrary to the best interests of Generation Lighting. © Visual Comfort & Co. Inc.

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Lumens Per Lamp	Light Loss Factor	Wattage	Mounting Height
⊕	A	6	Holophane	GDV3 P50 40K XXXX GLSLU RB FC	Granville Gen3, P50 Performance Package, 4000K CCT, 70CRI, Type 5 lunar optic distribution with Ribs	LED	1	9716	0.9	99	14'-0"
⊕	B	579	Generation Brands	8592-12	One light outdoor wall lantern	LED	1	1179	0.9	75	6'-6"
⊙	EX1	18	EXISTING	EXISTING	TEARDROP STYLE AREA LIGHT	CONFIRMED BY OTHERS	-	UNKNOWN	0.5	UNKNOWN	UNKNOWN
⊙	EX2	24	EXISTING	EXISTING	TEARDROP STYLE AREA LIGHT	CONFIRMED BY OTHERS	-	UNKNOWN	0.5	UNKNOWN	UNKNOWN

Statistics										
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min	Avg/Max			
OVERALL	+	0.4 fc	6.4 fc	0.0 fc	N/A	N/A	0.1:1			
MAIN STREET	✳	1.5 fc	3.4 fc	0.2 fc	17.0:1	7.5:1	0.4:1			

General Note

1. SEE SCHEDULE FOR LUMINAIRE MOUNTING HEIGHT.
2. SEE LUMINAIRE SCHEDULE FOR LIGHT LOSS FACTOR.
3. CALCULATIONS ARE SHOWN IN FOOTCANDLES AT: 0' - 0"
4. HOURS OF OPERATION: 24 HOURS PER DAY & 7 DAYS A WEEK.
5. ELECTRICAL SERVICE TO LIGHT FIXTURES SHALL BE PLACED UNDERGROUND.
6. FLASHING LIGHT SHALL NOT BE PERMITTED.
7. ONLY NECESSARY LIGHTING FOR SECURITY PURPOSES & LIMITED OPERATIONS SHALL BE PERMITTED AFTER A SITE'S HOURS OF OPERATION.

THE ENGINEER AND/OR ARCHITECT MUST DETERMINE APPLICABILITY OF THE LAYOUT TO EXISTING / FUTURE FIELD CONDITIONS. THIS LIGHTING LAYOUT REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER VARIABLE FIELD CONDITIONS. MOUNTING HEIGHTS INDICATED ARE FROM GRADE AND/OR FLOOR UP.

THESE LIGHTING CALCULATIONS ARE NOT A SUBSTITUTE FOR INDEPENDENT ENGINEERING ANALYSIS OF LIGHTING SYSTEM SUITABILITY AND SAFETY. THE ENGINEER AND/OR ARCHITECT IS RESPONSIBLE TO REVIEW FOR MICHIGAN ENERGY CODE AND LIGHTING QUALITY COMPLIANCE.

UNLESS EXEMPT, PROJECT MUST COMPLY WITH LIGHTING CONTROLS REQUIREMENTS DEFINED IN ASHRAE 90.1 2013. FOR SPECIFIC INFORMATION CONTACT GBA CONTROLS GROUP AT ASG@GASSERBUSH.COM OR 734-266-6705.

Alternates Note

THE USE OF FIXTURE ALTERNATES MUST BE RESUBMITTED TO THE CITY FOR APPROVAL.

Ordering Note

FOR INQUIRIES CONTACT GASSER BUSH AT QUOTES@GASSERBUSH.COM OR 734-266-6705.

Mounting Height Note

MOUNTING HEIGHT IS MEASURED FROM GRADE TO FACE OF FIXTURE. POLE HEIGHT SHOULD BE CALCULATED AS THE MOUNTING HEIGHT LESS BASE HEIGHT.

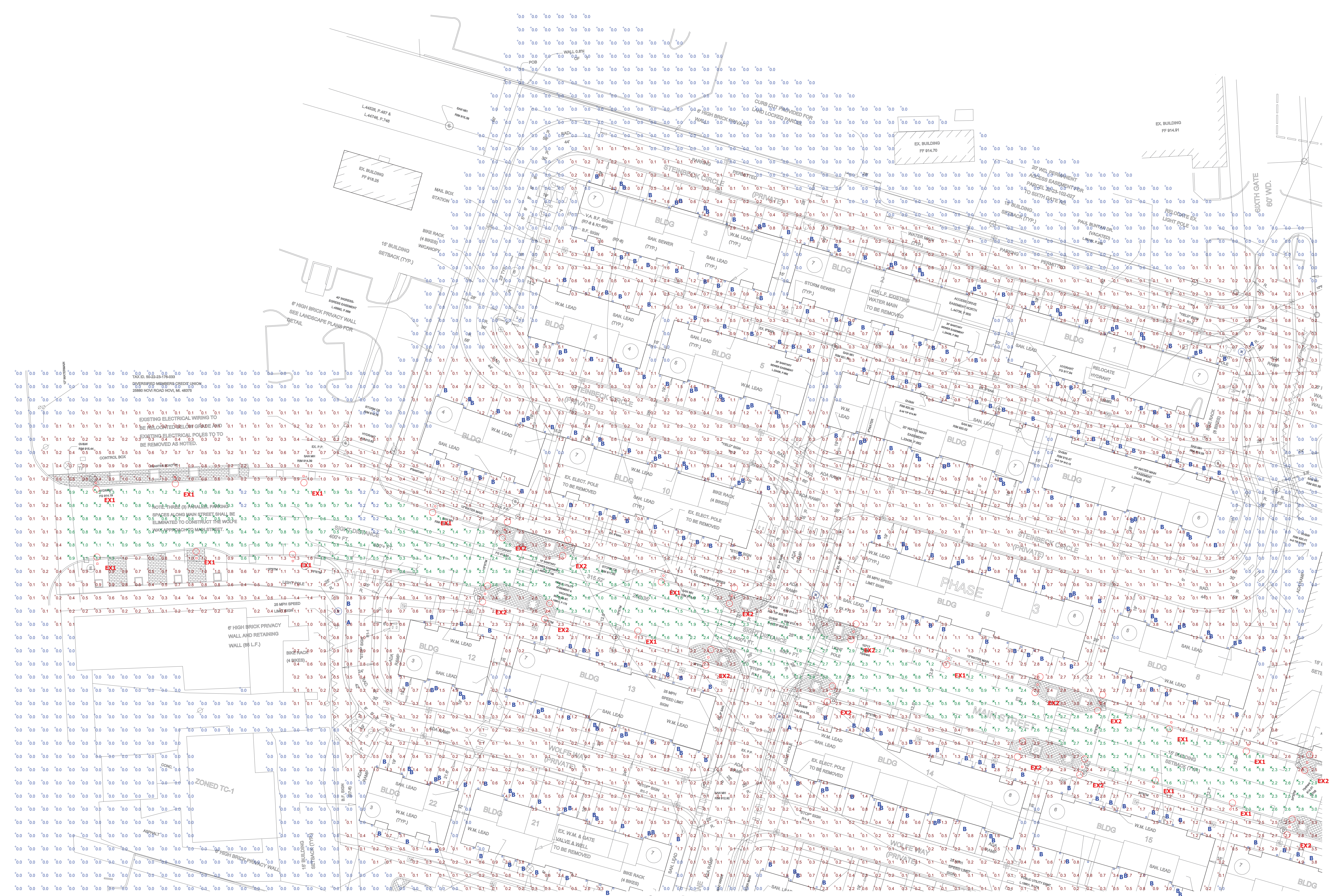
Drawing Note

THIS DRAWING WAS GENERATED FROM AN ELECTRONIC IMAGE FOR ESTIMATION PURPOSE ONLY. LAYOUT TO BE VERIFIED IN FIELD BY OTHERS.

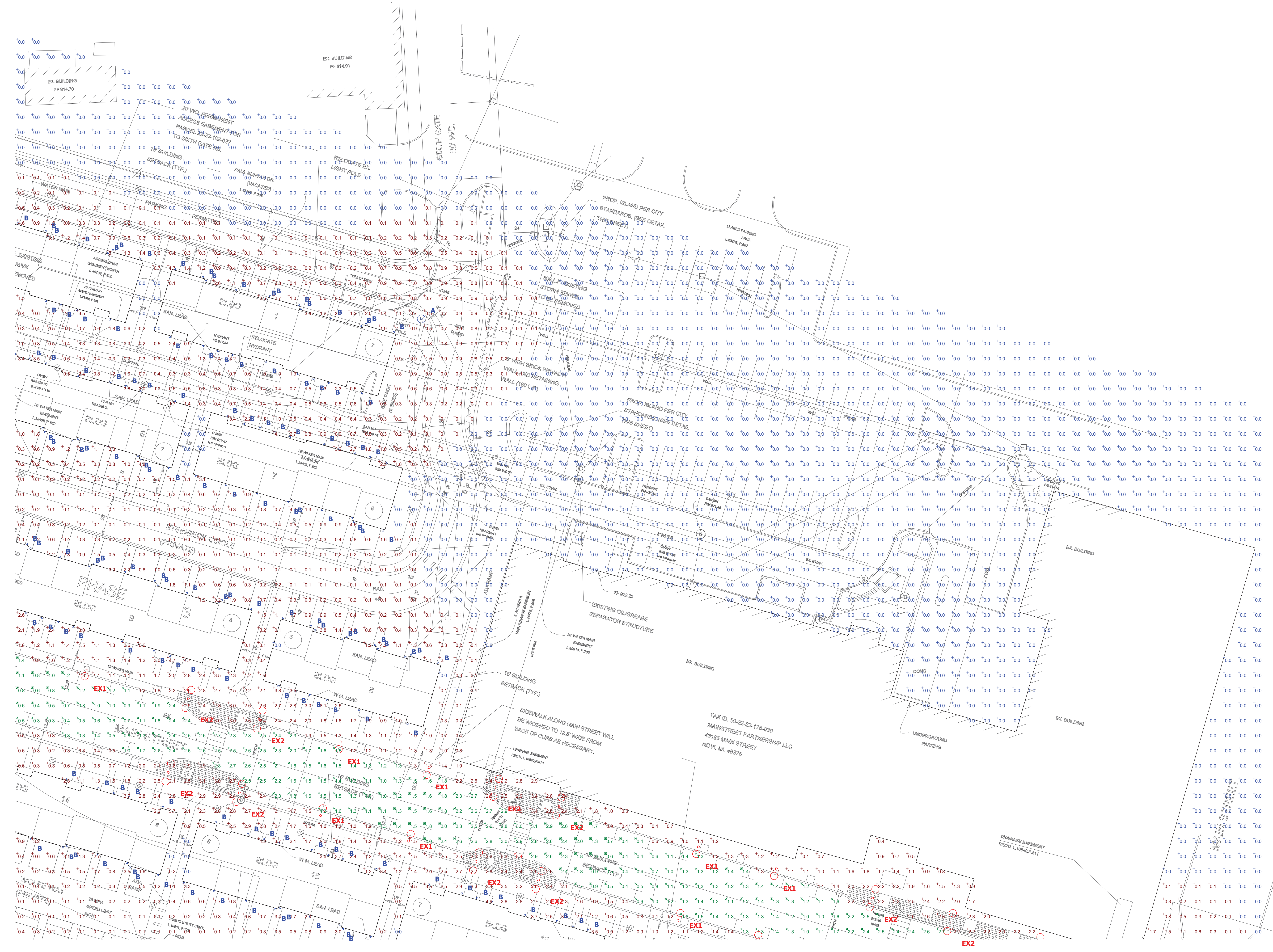


Plan View
Scale - 1" = 80ft

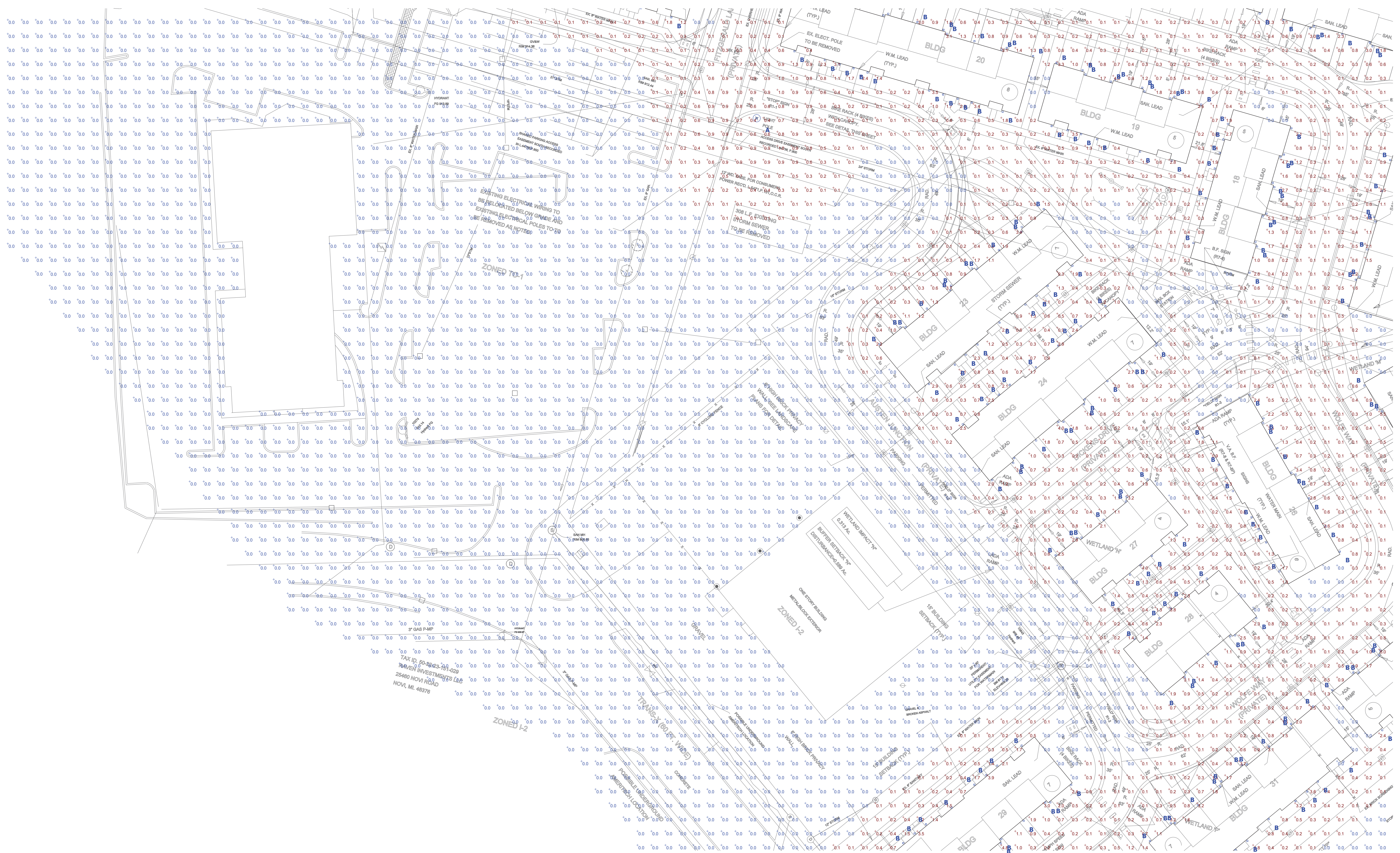




Plan View
Scale - 1" = 30ft



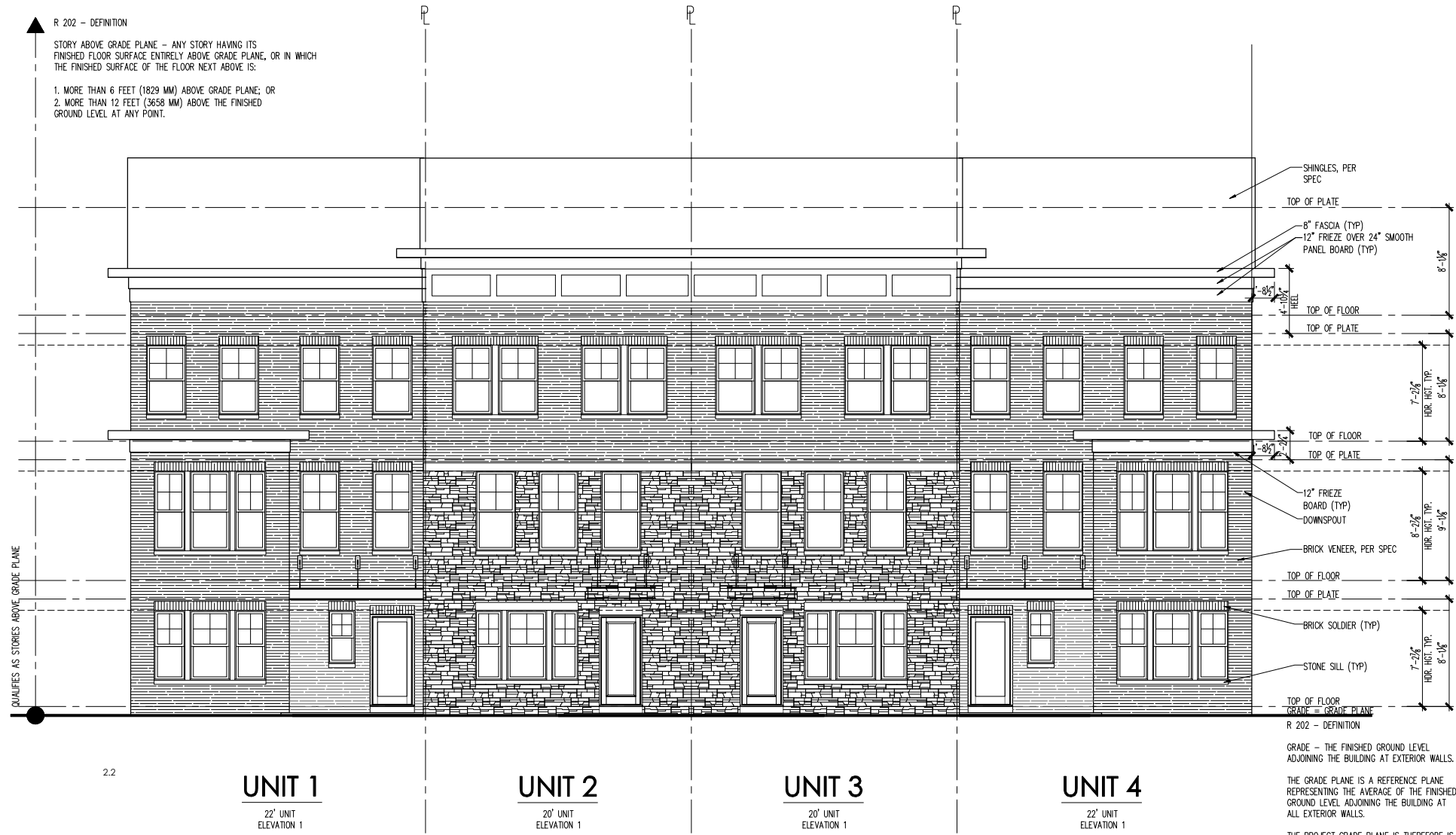
Plan View
 Scale - 1" = 30ft



TAX ID: 50-28023-00
RAVEN INVESTMENTS LLC
25460 NOVI ROAD
NOVI, MI 48376

Plan View
Scale - 1" = 30ft

THE TOWNES AT MAIN STREET
PHOTOMETRIC SITE PLAN
PREPARED FOR: THE UMLOR GROUP
GASSER BUSH ASSOCIATES
WWW.GASSERBUSH.COM



4-UNIT BUILDING CONTROL 'A' - FRONT ELEVATION - HIGH VIZ
 SCALE: 3/16" = 1'-0"

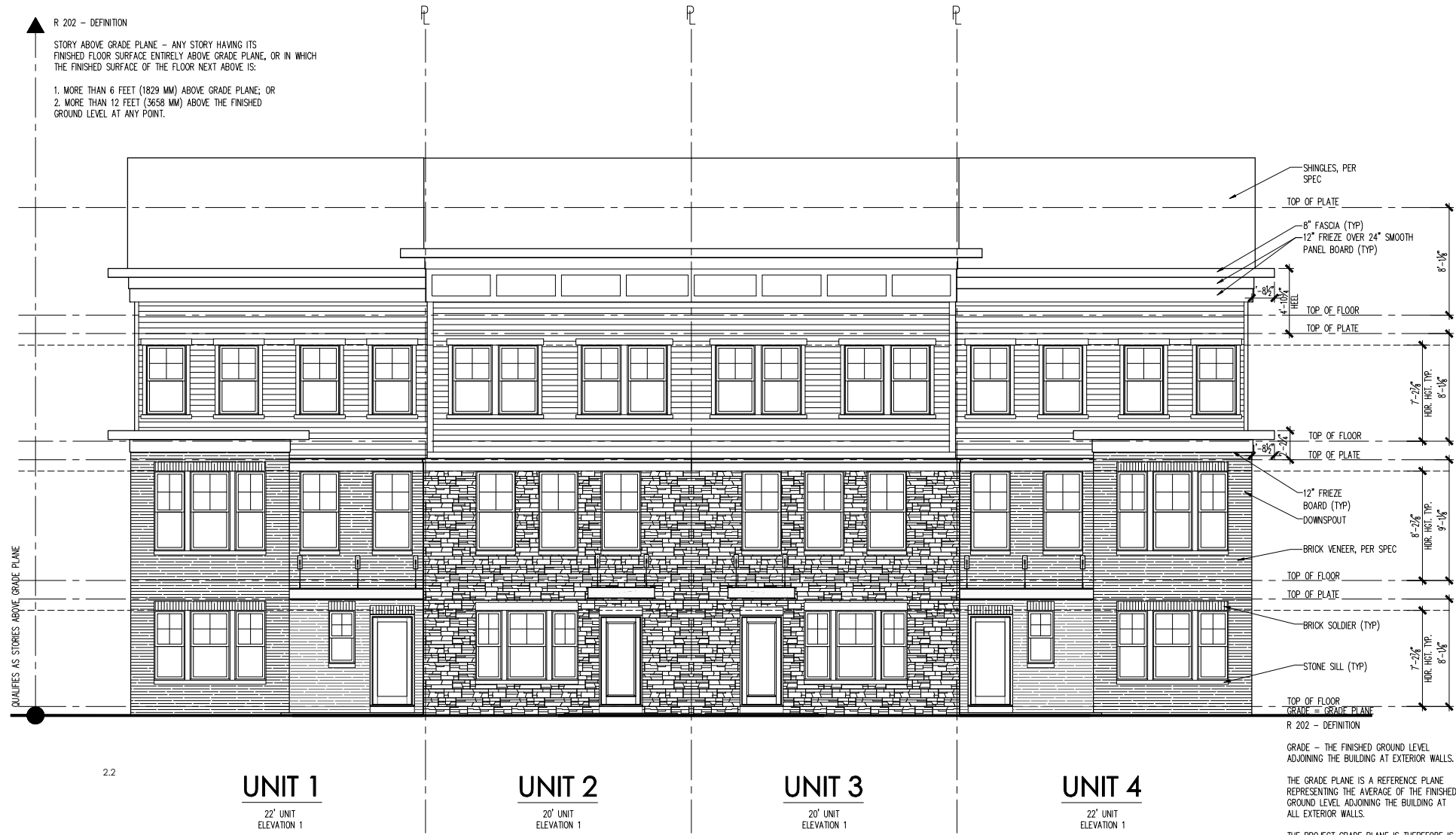
PRODUCTION MANAGER	EM/ER
INITIAL RELEASE DATE:	05/31/2016
CURRENT RELEASE DATE:	01/25/2019

REV #	DATE / DESCRIPTION
1	10/04/2016 PERMIT COMMENTS
2	10/14/2016 PERMIT COMMENTS
3	12/22/2016 PLAN REVISIONS
4	09/17/2018 PLAN REVISIONS
5	
6	
7	
8	
9	
10	

GARAGE HANDING
RL-GE-KR / KC

PLAN NAME
 NPC PLAN NUMBER
 LAWSON PLAN ID

SHEET
CP-4A
EL1



R 202 - DEFINITION
 STORY ABOVE GRADE PLANE - ANY STORY HAVING ITS FINISHED FLOOR SURFACE ENTIRELY ABOVE GRADE PLANE, OR IN WHICH THE FINISHED SURFACE OF THE FLOOR NEXT ABOVE IS:
 1. MORE THAN 6 FEET (1829 MM) ABOVE GRADE PLANE; OR
 2. MORE THAN 12 FEET (3658 MM) ABOVE THE FINISHED GROUND LEVEL AT ANY POINT.

SHINGLES, PER SPEC
 TOP OF PLATE
 8" FASCIA (TYP)
 12" FRIEZE OVER 24" SMOOTH PANEL BOARD (TYP)
 4-1/2" HEEL
 TOP OF FLOOR
 TOP OF PLATE
 7'-2 3/4" HBR. HGT. TYP. 8'-1/8"
 TOP OF FLOOR
 TOP OF PLATE
 12" FRIEZE BOARD (TYP)
 DOWNSPOUT
 BRICK VENEER, PER SPEC
 TOP OF FLOOR
 TOP OF PLATE
 8'-2 3/4" HBR. HGT. TYP. 9'-1/8"
 BRICK SOLDIER (TYP)
 STONE SILL (TYP)
 7'-2 3/4" HBR. HGT. TYP. 8'-1/8"
 TOP OF FLOOR
 GRADE = GRADE PLANE
 R 202 - DEFINITION
 GRADE - THE FINISHED GROUND LEVEL ADJOINING THE BUILDING AT EXTERIOR WALLS.
 THE GRADE PLANE IS A REFERENCE PLANE REPRESENTING THE AVERAGE OF THE FINISHED GROUND LEVEL ADJOINING THE BUILDING AT ALL EXTERIOR WALLS.
 THE PROJECT GRADE PLANE IS THEREFORE IS GRADE (WHICH IS 8" BELOW FINISHED FLOOR AT ALL CORNERS OF THE STRUCTURE).

4-UNIT BUILDING CONTROL 'A' - FRONT ELEVATION
 SCALE: 3/16" = 1'-0"

Michigan Division
 1900 Golf Road, - Suite 300
 Schaumburg, Illinois 60173



Building Control Plan
 Front Elevation
 Units 1-4

PRODUCTION MANAGER EM/ER	
INITIAL RELEASE DATE: 05/31/2016	
CURRENT RELEASE DATE: 01/25/2019	
REV #	DATE / DESCRIPTION
△	10/04/2016 PERMIT COMMENTS
△	10/14/2016 PERMIT COMMENTS
△	12/22/2016 PLAN REVISIONS
△	09/17/2018 PLAN REVISIONS
△	
△	
△	
△	
△	
△	
△	
△	
GARAGE HANDING RL-GE-KR / KC	
PLAN NAME	
NPC PLAN NUMBER	
LAWSON PLAN ID	
SHEET	
CP-4A	
EL1	

NOTE: SCALES NOTED ON DRAWINGS RELATE TO FULL SIZE PLOTS ON 22x34 SHEETS - 11x17 SHEETS REPRESENT 1/2 SCALE PLOTS



4-UNIT BUILDING CONTROL 'A' - REAR ELEVATION

SCALE: 3/16" = 1'-0"
"NOT TO SCALE"



Building Control Plan
Rear Elevation
Units 1-4

REV #	DATE / DESCRIPTION
△	10/04/2016 PERMIT COMMENTS
△	10/14/2016 PERMIT COMMENTS
△	12/22/2016 PLAN REVISIONS
△	
△	
△	
△	
△	
△	
△	

GARAGE HANDING
RL-GE-KR / KC

PLAN NAME
NPC PLAN NUMBER
LAWSON PLAN ID

SHEET
CP-4A
EL3

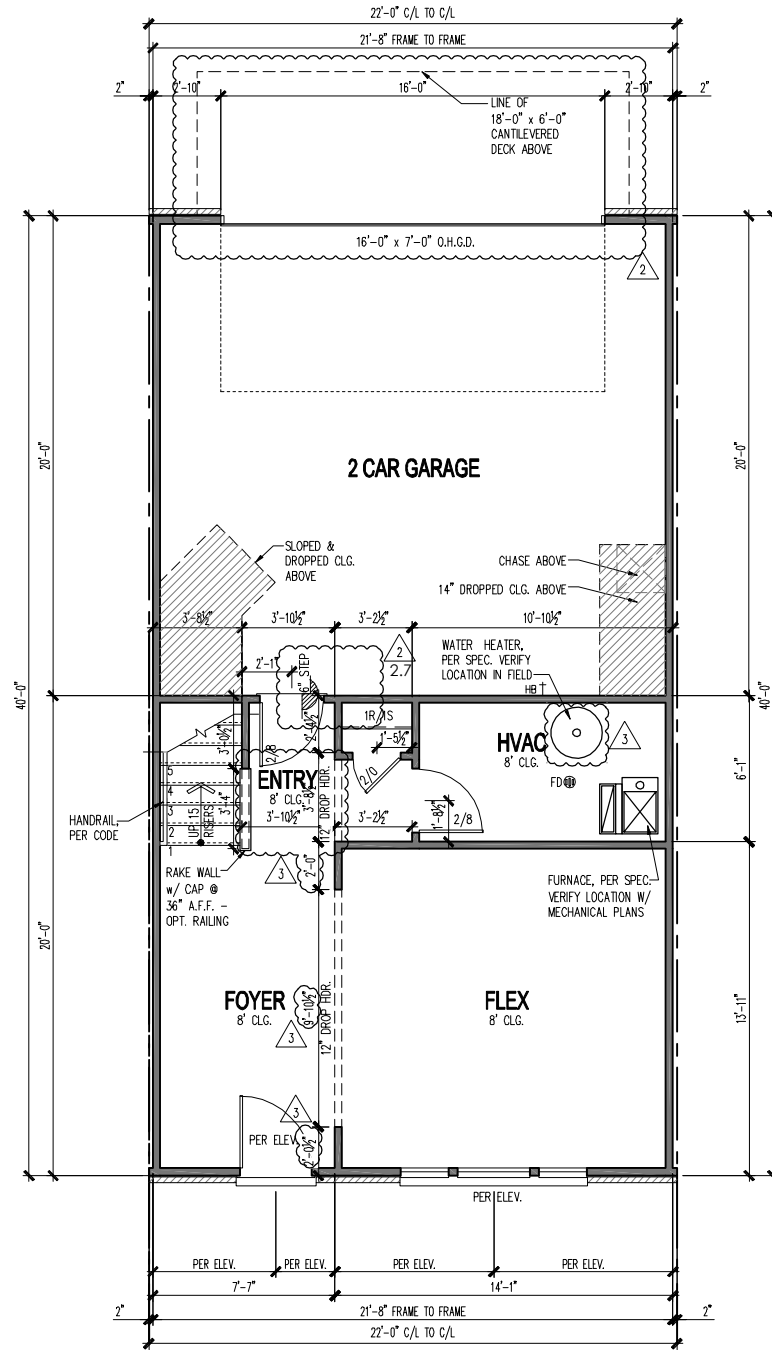
NOTE: SCALES NOTED ON DRAWINGS RELATE TO FULL SIZE PLOTS ON 22x34 SHEETS - 11x17 SHEETS REPRESENT 1/2 SCALE PLOTS

GENERAL FLOOR PLAN NOTES

GENERAL SPECIFICATIONS

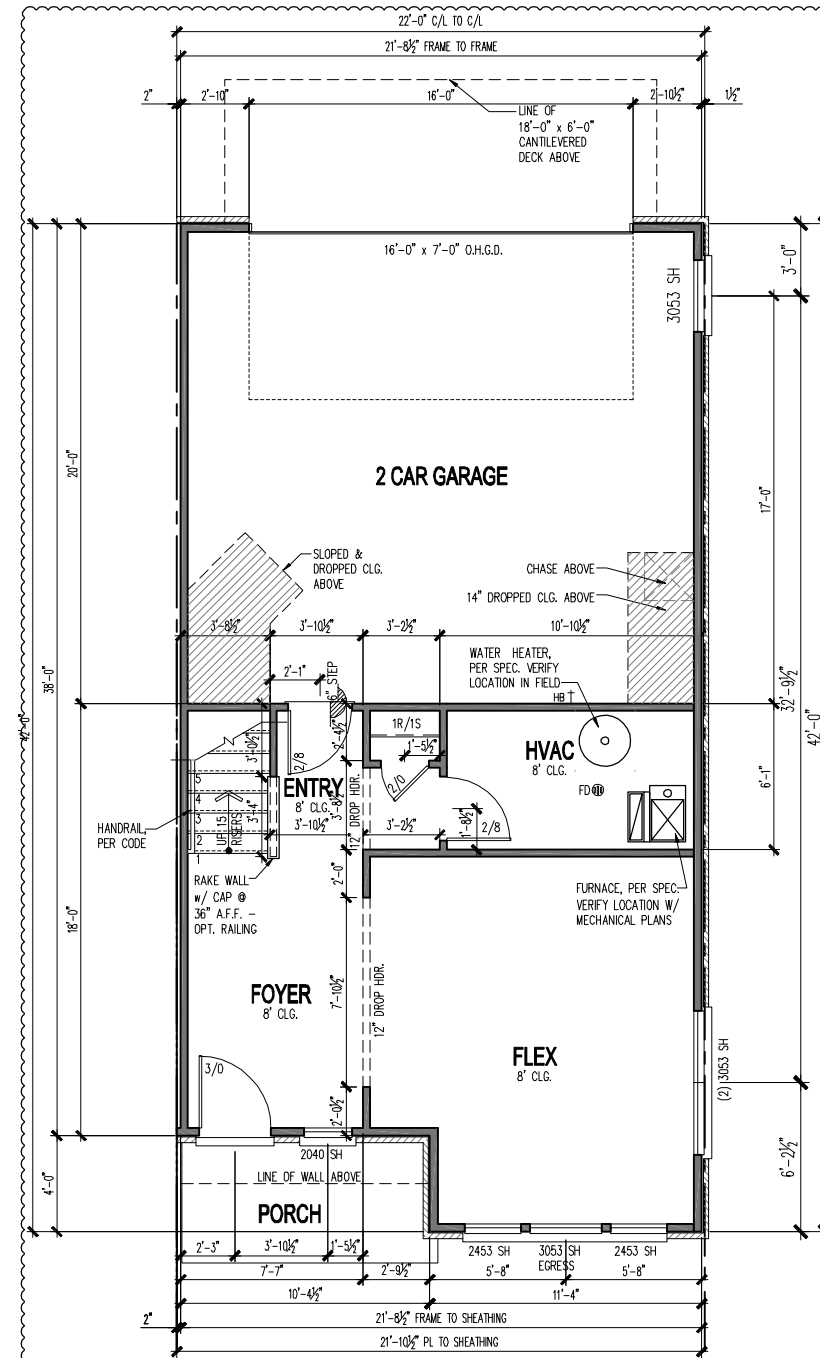
- ALL ANGLED WALLS (OTHER THAN THOSE AT 90°) SHALL BE CONSIDERED TO BE AT 45° UNLESS NOTED OTHERWISE.
- ALL STUDS AT EXTERIOR AND INTERIOR WALLS SHALL BE 2x4 UNLESS OTHERWISE NOTED.
- ALL STUDS AT EXTERIOR WALLS AND INTERIOR BEARING WALLS TO BE FRAMED AT 16" O.C. UNLESS NOTED OTHERWISE.
- ALL NON-BEARING WALLS, OTHER THAN IN THE KITCHEN AND PLANNING CENTERS, TO BE 2x4 STUDS AT 24" O.C. UNLESS OTHERWISE NOTED OR RESTRICTED BY LOCAL CODES OR ORDINANCES. KITCHEN AND PLANNING CENTER WALLS WHERE WALL CABINETS ARE TO BE HUNG SHALL BE FRAMED AT 16" O.C.
- PROVIDE DOUBLE 2x TOP PLATES AT ALL LOAD BEARING WALLS.
- PROVIDE SINGLE TOP PLATE AT ALL INTERIOR NON-LOADING BEARING WALLS.
- PROVIDE 5/8" DRYWALL AT WALLS, CEILING AND UNDERSIDE OF STAIR ASSEMBLY ACCESSIBLE SPACE UNDER STAIRS IN ACCORDANCE WITH THE CURRENTLY ADOPTED EDITION OF THE IRC OR APPLICABLE LOCAL CODE. ALL FLOORS CONSTRUCTED WITH ENGINEERED TRUSSES SHALL HAVE THE UNDERSIDE FULLY SHEATHED WITH A MINIMUM 5/8" TYPE 'X' GYPSUM BOARD.
- ALL GLAZING INSTALLED IN HAZARDOUS LOCATIONS AS DEFINED BY THE CURRENTLY ADOPTED EDITION OF THE IRC OR APPLICABLE LOCAL CODE SHALL HAVE A PERMANENT DESIGNATION OR LABEL AFFIXED TO EACH PANE OF GLAZING BEARING THE MANUFACTURER'S LABEL SHOWING THE TYPE AND THICKNESS OF GLASS. FOR OTHER THAN TEMPERED GLASS, LABELS MAY BE OMITTED PROVIDED THE BUILDING OFFICIAL APPROVES THE USE OF A CERTIFICATE, AFFIDAVIT OR OTHER EVIDENCE CONFIRMING COMPLIANCE WITH THE CURRENTLY ADOPTED EDITION OF THE IRC OR APPLICABLE LOCAL CODE.
- ALL BATHTUB AND SHOWER FLOORS AND WALLS ABOVE BATHTUBS WITH INSTALLED SHOWER HEADS AND IN SHOWER COMPARTMENTS SHALL BE FINISHED WITH A NON-ABSORBENT SURFACE. SUCH WALL SURFACES SHALL EXTEND TO A HEIGHT NOT LESS THAN 72" ABOVE THE FLOOR PER THE CURRENTLY ADOPTED EDITION OF THE IRC OR APPLICABLE LOCAL CODE.
- PROVIDE THERMO-PLY SHEATHING AND BATT INSULATION FILLING ALL CAVITIES AT EXTERIOR WALLS SURROUNDING TUBS AND SHOWERS.
- SECTION R309.7 SEPARATION REQUIRED. THE GARAGE SHALL BE SEPARATED FROM THE RESIDENCE AND ITS ATTIC AREA BY MEANS OF A MINIMUM 1-HOUR RATED FIRE BARRIER CONSTRUCTED OF FIVE-EIGHTHS INCH (5/8") TYPE X GYPSUM BOARD OR EQUIVALENT APPLIED TO ALL WALLS, CEILINGS AND SUPPORT STRUCTURES, INCLUDING BEAMS AND COLUMNS, OF THE GARAGE. SAID GYPSUM BOARD ASSEMBLY SHALL BE FULLY FIRE TAPED, AND ALL PENETRATIONS THROUGH SAID ASSEMBLY SHALL BE FIRESTOPPED WITH A FIRESTOP SYSTEM LISTED AND APPROVED FOR THE APPLICATION. DUCTS IN A PRIVATE GARAGE AND DUCTS PENETRATING THE WALLS OR CEILINGS SEPARATING THE DWELLING UNIT FROM THE GARAGE SHALL BE ENCAPSULATED IN CONSTRUCTION EQUAL TO THAT OF THOSE WALLS AND CEILINGS, AND SHALL HAVE NO OPENINGS INTO THE GARAGE.
- FOR ADDITIONAL INFORMATION SEE STRUCTURAL DRAWINGS AND NOTES.
- ALL CONCEALED FLOOR/CEILING SPACES WHICH ARE GREATER THAN 500 SQ FT SHALL BE DRAFTSTOPPED INTO APPROXIMATELY EQUAL AREAS OF LESS THAN 500 SQ FT. (SECTION R302.12 AS AMENDED)
- ALL DOORS FROM THE GARAGE TO THE RESIDENCE SHALL BE A MINIMUM 3/4 HOUR FIRE RATED DOOR AND BE SELF-CLOSING AND LATCHING. (SECTION R309.6 AS AMENDED)
- FLEXIBLE METALLIC AIR DUCTS MAY BE USED ONLY WHERE PRACTICAL DIFFICULTIES ARE ENCOUNTERED AND IS SUBJECT TO REVIEW AND APPROVAL BY THE BUILDING OFFICIAL PRIOR TO INSTALLATION. (SECTION M1601.1.1.1 AS AMENDED)
- PROVIDE COMBUSTION AIR FOR ALL FUEL GAS APPLIANCES INCLUDING THE CLOTHES DRYER. IN COMPLIANCE WITH SECTION G2407. THE INSTALLATION OF A FULL-LOUVERED DOOR OR TWO AIR TRANSFER GRILLS (MINIMUM 100 SQ. IN. EACH AND LOCATED WITHIN 12" OF THE FLOOR AND CEILING) IS CODE COMPLIANT.
- PROVIDE COMBUSTION AIR FOR ALL FUEL GAS APPLIANCES IN THE MECHANICAL ROOM INCLUDING THE FURNACE (UNLESS OBTAINING ALL COMBUSTION AIR FROM THE OUTDOORS AND THE WATER HEATERS IN COMPLIANCE WITH SECTION G2407. THE INSTALLATION OF A FULL-LOUVERED DOOR OR TWO AIR TRANSFER GRILLS (MINIMUM 100 SQ. IN. EACH AND LOCATED WITHIN 12" OF THE FLOOR AND CEILING) IS CODE COMPLIANT. IF COMBUSTION AIR DUCTS FROM THE EXTERIOR ARE PROVIDED TO THE ROOM, THEN NOTE SECTION R402.4.4 OF THE INTERNATIONAL ENERGY CONSERVATION CODE.

2.1, 2.3, 2.13



FIRST FLOOR PLAN - 4" EXTERIOR WALLS - ELEV. 2 & 3

SCALE: 1/4" = 1'-0"
NOT TO SCALE



FIRST FLOOR PLAN - 4" EXTERIOR WALLS - ELEV. 1

SCALE: 1/4" = 1'-0"
NOT TO SCALE

REV #	DATE / DESCRIPTION
1	10/04/2016 PERMIT COMMENTS
2	10/14/2016 PERMIT COMMENTS
3	12/22/2016 PLAN REVISIONS

GARAGE HANDING
RL-GE-KR

PLAN NAME
22' Unit
NSP PLAN NUMBER
2466.913
LAWSON PLAN ID

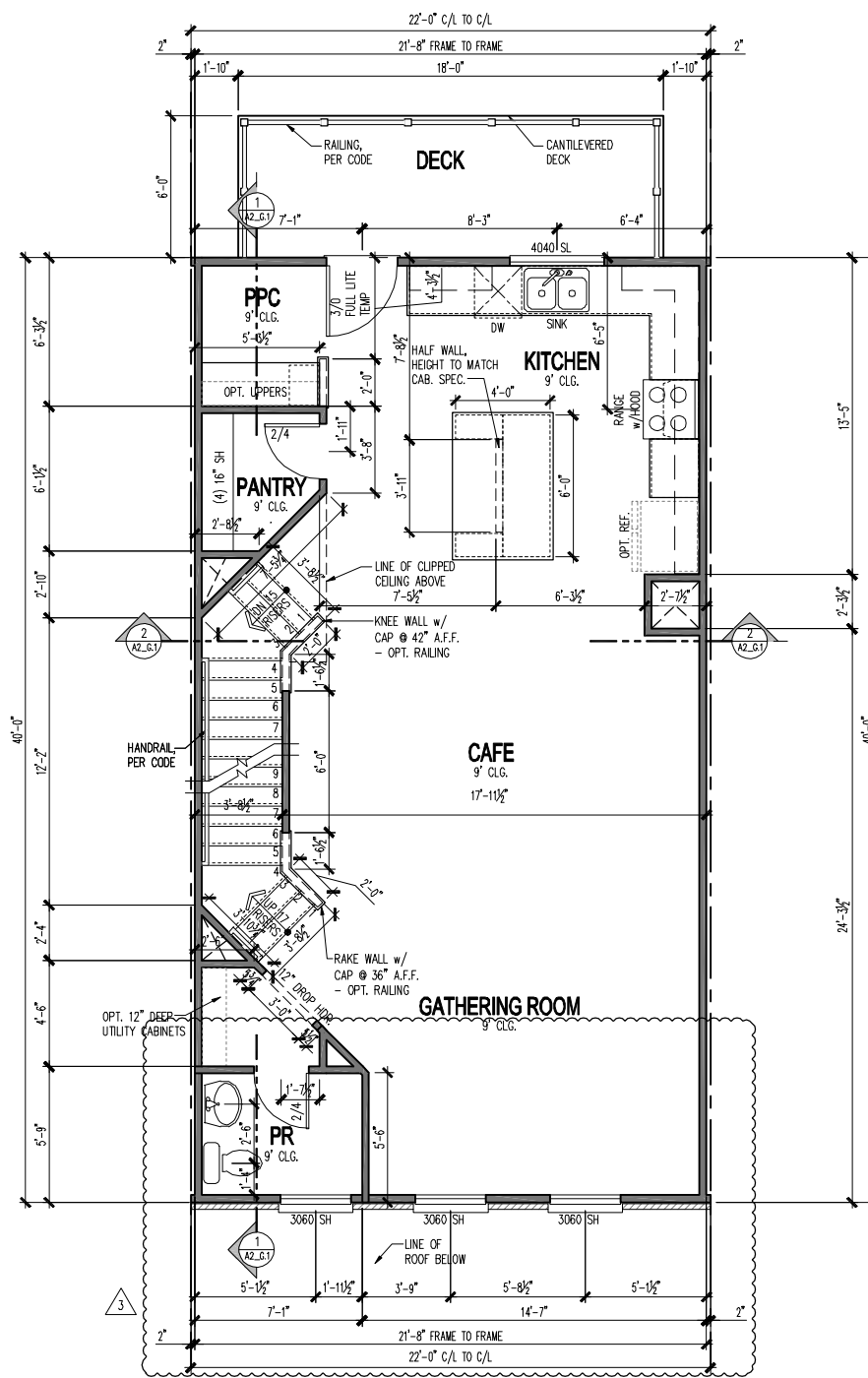
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4-1.1

GENERAL FLOOR PLAN NOTES

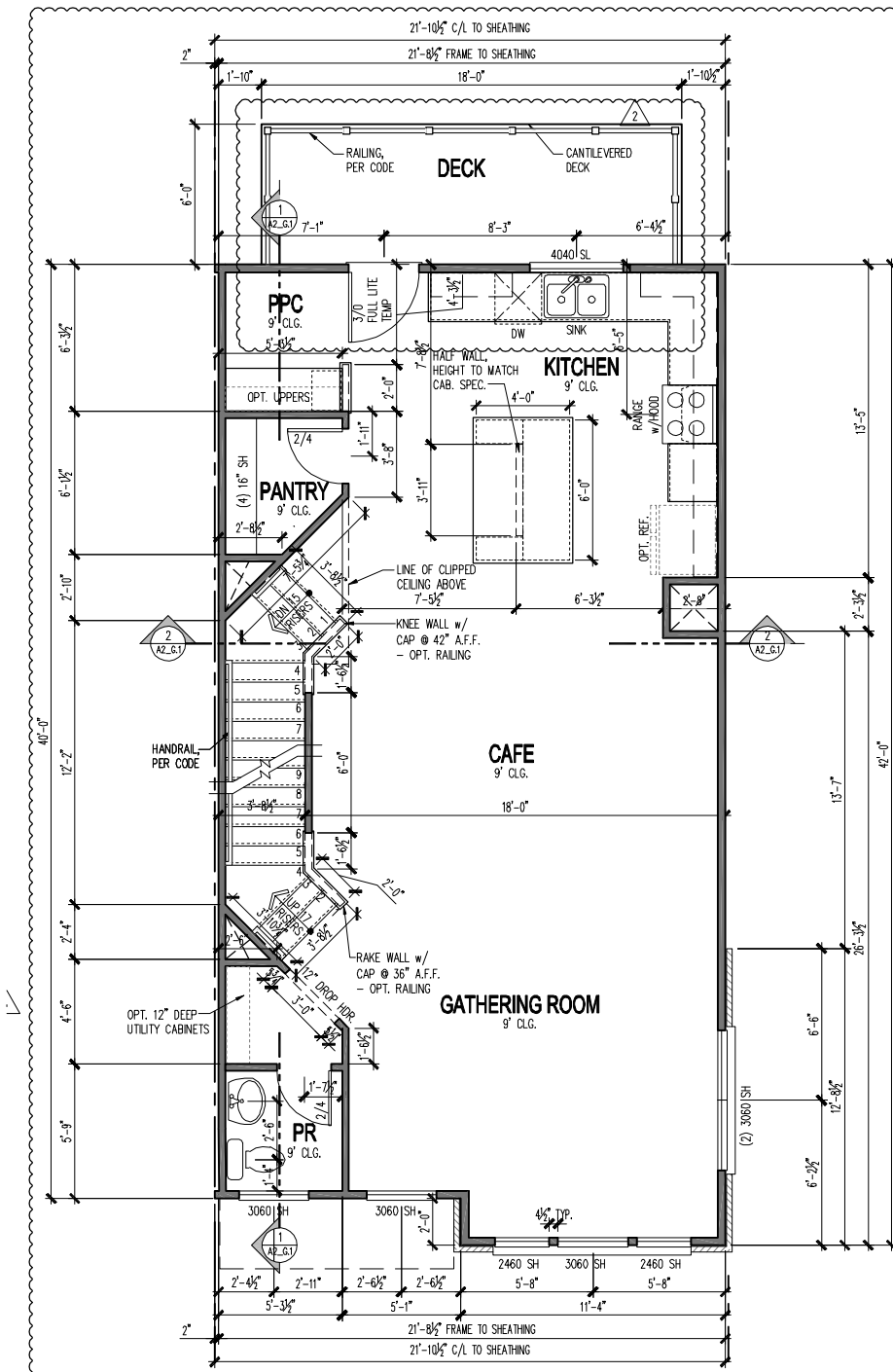
GENERAL SPECIFICATIONS

- ALL ANGLED WALLS (OTHER THAN THOSE AT 90°) SHALL BE CONSIDERED TO BE AT 45° UNLESS NOTED OTHERWISE.
- ALL STUDS AT EXTERIOR AND INTERIOR WALLS SHALL BE 2x4 UNLESS OTHERWISE NOTED.
- ALL STUDS AT EXTERIOR WALLS AND INTERIOR BEARING WALLS TO BE FRAMED AT 16" O.C. UNLESS NOTED OTHERWISE.
- ALL NON-BEARING WALLS, OTHER THAN IN THE KITCHEN AND PLANNING CENTERS, TO BE 2x4 STUDS AT 24" O.C. UNLESS OTHERWISE NOTED OR RESTRICTED BY LOCAL CODES OR ORDINANCES. KITCHEN AND PLANNING CENTER WALLS WHERE WALL CABINETS ARE TO BE HUNG SHALL BE FRAMED AT 16" O.C.
- PROVIDE DOUBLE 2x TOP PLATES AT ALL LOAD BEARING WALLS.
- PROVIDE SINGLE TOP PLATE AT ALL INTERIOR NON-LOADING BEARING WALLS.
- PROVIDE 5/8" DRYWALL AT WALLS, CEILING AND UNDERSIDE OF STAIR ASSEMBLY ACCESSIBLE SPACE UNDER STAIRS IN ACCORDANCE WITH THE CURRENTLY ADOPTED EDITION OF THE IRC OR APPLICABLE LOCAL CODE. ALL FLOORS CONSTRUCTED WITH ENGINEERED TRUSSES SHALL HAVE THE UNDERSIDE FULLY SHEATHED WITH A MINIMUM 5/8" TYPE 'X' GYPSUM BOARD.
- ALL GLAZING INSTALLED IN HAZARDOUS LOCATIONS AS DEFINED BY THE CURRENTLY ADOPTED EDITION OF THE IRC OR APPLICABLE LOCAL CODE SHALL HAVE A PERMANENT DESIGNATION OR LABEL AFFIXED TO EACH PANE OF GLAZING BEARING THE MANUFACTURER'S LABEL SHOWING THE TYPE AND THICKNESS OF GLASS. FOR OTHER THAN TEMPERED GLASS, LABELS MAY BE OMITTED PROVIDED THE BUILDING OFFICIAL APPROVES THE USE OF A CERTIFICATE, AFFIDAVIT OR OTHER EVIDENCE CONFIRMING COMPLIANCE WITH THE CURRENTLY ADOPTED EDITION OF THE IRC OR APPLICABLE LOCAL CODE.
- ALL BATHTUB AND SHOWER FLOORS AND WALLS ABOVE BATHTUBS WITH INSTALLED SHOWER HEADS AND IN SHOWER COMPARTMENTS SHALL BE FINISHED WITH A NON-ABSORBENT SURFACE. SUCH WALL SURFACES SHALL EXTEND TO A HEIGHT NOT LESS THAN 72" ABOVE THE FLOOR PER THE CURRENTLY ADOPTED EDITION OF THE IRC OR APPLICABLE LOCAL CODE.
- PROVIDE THERMO-PLY SHEATHING AND BATT INSULATION FILLING ALL CAVITIES AT EXTERIOR WALLS SURROUNDING TUBS AND SHOWERS.
- SECTION R309.7 SEPARATION REQUIRED. THE GARAGE SHALL BE SEPARATED FROM THE RESIDENCE AND ITS ATTIC AREA BY MEANS OF A MINIMUM 1-HOUR RATED FIRE BARRIER CONSTRUCTED OF FIVE-EIGHTHS (5/8") TYPE X GYPSUM BOARD OR EQUIVALENT APPLIED TO ALL WALLS, CEILINGS AND SUPPORT STRUCTURES, INCLUDING BEAMS AND COLUMNS, OF THE GARAGE. SAID GYPSUM BOARD ASSEMBLY SHALL BE FULLY FIRE TAPED, AND ALL PENETRATIONS THROUGH SAID ASSEMBLY SHALL BE FIRESTOPPED WITH A FIRESTOP SYSTEM LISTED AND APPROVED FOR THE APPLICATION. DUCTS IN A PRIVATE GARAGE AND DUCTS PENETRATING THE WALLS OR CEILINGS SEPARATING THE DWELLING UNIT FROM THE GARAGE SHALL BE ENCAPSULATED IN CONSTRUCTION EQUAL TO THAT OF THOSE WALLS AND CEILINGS, AND SHALL HAVE NO OPENINGS INTO THE GARAGE.
- FOR ADDITIONAL INFORMATION SEE STRUCTURAL DRAWINGS AND NOTES.
- ALL CONCEALED FLOOR/CEILING SPACES WHICH ARE GREATER THAN 500 SQFT SHALL BE DRAFTSTOPPED INTO APPROXIMATELY EQUAL AREAS OF LESS THAN 500 SQFT. (SECTION R302.12 AS AMENDED)
- ALL DOORS FROM THE GARAGE TO THE RESIDENCE SHALL BE A MINIMUM 3/4 HOUR FIRE RATED DOOR AND BE SELF-CLOSING AND LATCHING. (SECTION R309.6 AS AMENDED)
- FLEXIBLE METALLIC AIR DUCTS MAY BE USED ONLY WHERE PRACTICAL DIFFICULTIES ARE ENCOUNTERED AND IS SUBJECT TO REVIEW AND APPROVAL BY THE BUILDING OFFICIAL PRIOR TO INSTALLATION. (SECTION M1601.1.1.1 AS AMENDED)
- PROVIDE COMBUSTION AIR FOR ALL FUEL GAS APPLIANCES INCLUDING THE CLOTHES DRYER. IN COMPLIANCE WITH SECTION G2407. THE INSTALLATION OF A FULL-LOUVERED DOOR OR TWO AIR TRANSFER GRILLS (MINIMUM 100 SQ. IN. EACH AND LOCATED WITHIN 12" OF THE FLOOR AND CEILING) IS CODE COMPLIANT.
- PROVIDE COMBUSTION AIR FOR ALL FUEL GAS APPLIANCES IN THE MECHANICAL ROOM INCLUDING THE FURNACE (UNLESS OBTAINING ALL COMBUSTION AIR FROM THE OUTDOORS AND THE WATER HEATERS IN COMPLIANCE WITH SECTION G2407. THE INSTALLATION OF A FULL-LOUVERED DOOR OR TWO AIR TRANSFER GRILLS (MINIMUM 100 SQ. IN. EACH AND LOCATED WITHIN 12" OF THE FLOOR AND CEILING) IS CODE COMPLIANT. IF COMBUSTION AIR DUCTS FROM THE EXTERIOR ARE PROVIDED TO THE ROOM, THEN NOTE SECTION R402.4.4 OF THE INTERNATIONAL ENERGY CONSERVATION CODE.

2.1, 2.3, 2.13



SECOND FLOOR PLAN - 4" WALLS - ELEV. 2
SCALE: 1/4" = 1'-0"
NOT TO SCALE



SECOND FLOOR PLAN - 4" WALLS - ELEV. 1
SCALE: 1/4" = 1'-0"
NOT TO SCALE



PRODUCTION MANAGER	DM / ER
WRITE RELEASE DATE:	05/31/2016
CURRENT RELEASE DATE:	12/09/2016

REV #	DATE / DESCRIPTION
1	10/04/2016 PERMIT COMMENTS
2	10/14/2016 PERMIT COMMENTS
3	12/22/2016 PLAN REVISIONS

GARAGE HANDING
RL-GE-KR

PLAN NAME
22' Unit
NSP PLAN NUMBER
2466.913
LAWSON PLAN ID

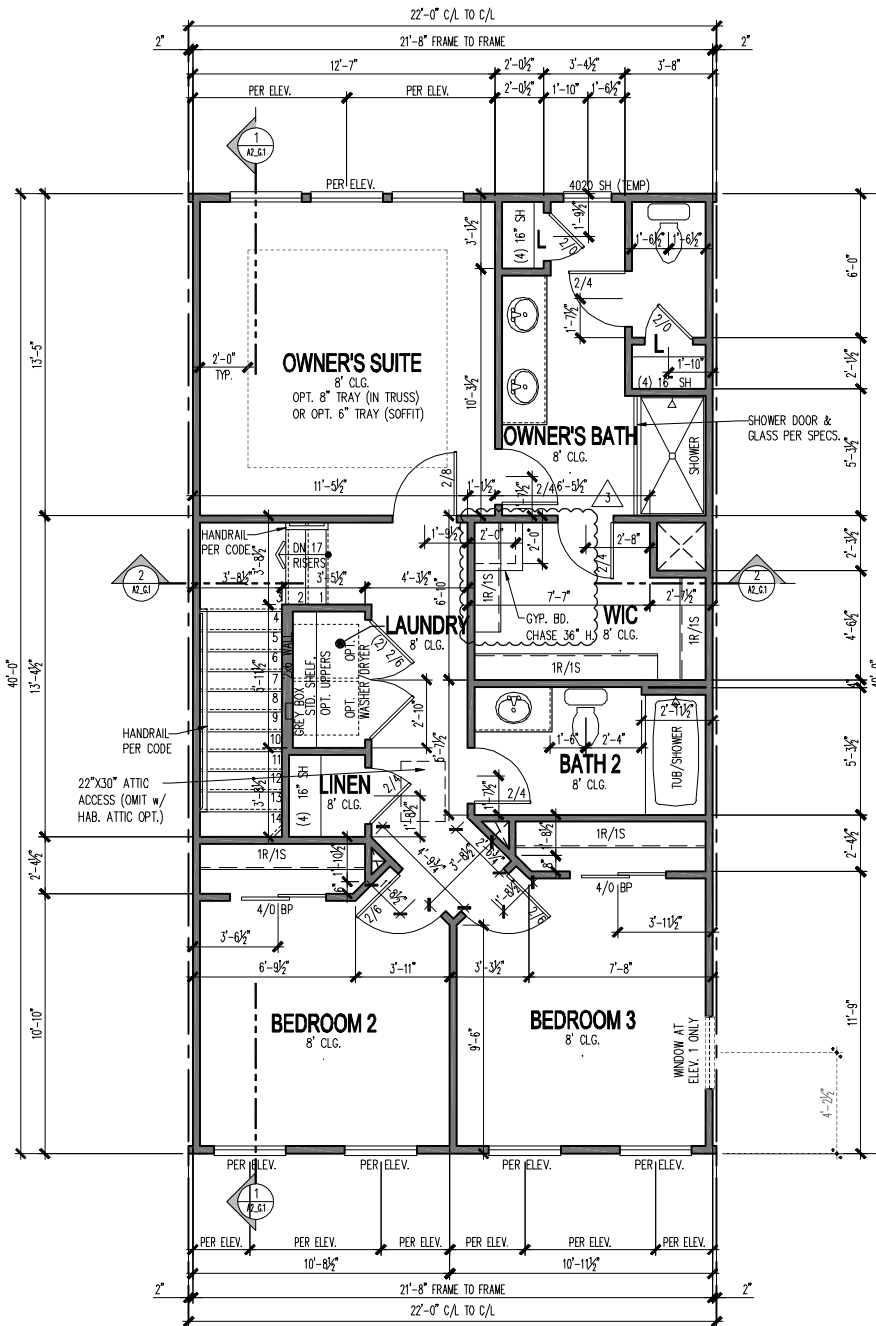
SHEET
A1
4-2.1

GENERAL FLOOR PLAN NOTES

GENERAL SPECIFICATIONS

- ALL ANGLED WALLS (OTHER THAN THOSE AT 90°) SHALL BE CONSIDERED TO BE AT 45° UNLESS NOTED OTHERWISE.
- ALL STUDS AT EXTERIOR AND INTERIOR WALLS SHALL BE 2x4 UNLESS OTHERWISE NOTED.
- ALL STUDS AT EXTERIOR WALLS AND INTERIOR BEARING WALLS TO BE FRAMED AT 16" O.C. UNLESS NOTED OTHERWISE.
- ALL NON-BEARING WALLS, OTHER THAN IN THE KITCHEN AND PLANNING CENTERS, TO BE 2x4 STUDS AT 24" O.C. UNLESS OTHERWISE NOTED OR RESTRICTED BY LOCAL CODES OR ORDINANCES. KITCHEN AND PLANNING CENTER WALLS WHERE WALL CABINETS ARE TO BE HUNG SHALL BE FRAMED AT 16" O.C.
- PROVIDE DOUBLE 2x2 TOP PLATES AT ALL LOAD BEARING WALLS.
- PROVIDE SINGLE TOP PLATE AT ALL INTERIOR NON-LOADING BEARING WALLS.
- PROVIDE 5/8" DRYWALL AT WALLS, CEILING AND UNDERSIDE OF STAIR ASSEMBLY ACCESSIBLE SPACE UNDER STAIRS IN ACCORDANCE WITH THE CURRENTLY ADOPTED EDITION OF THE IRC OR APPLICABLE LOCAL CODE. ALL FLOORS CONSTRUCTED WITH ENGINEERED TRUSSES SHALL HAVE THE UNDERSIDE FULLY SHEATHED WITH A MINIMUM 5/8" TYPE 'X' GYPSUM BOARD.
- ALL GLAZING INSTALLED IN HAZARDOUS LOCATIONS AS DEFINED BY THE CURRENTLY ADOPTED EDITION OF THE IRC OR APPLICABLE LOCAL CODE SHALL HAVE A PERMANENT DESIGNATION OR LABEL AFFIXED TO EACH PANE OF GLAZING BEARING THE MANUFACTURER'S LABEL SHOWING THE TYPE AND THICKNESS OF GLASS. FOR OTHER THAN TEMPERED GLASS, LABELS MAY BE OMITTED PROVIDED THE BUILDING OFFICIAL APPROVES THE USE OF A CERTIFICATE, AFFIDAVIT OR OTHER EVIDENCE CONFIRMING COMPLIANCE WITH THE CURRENTLY ADOPTED EDITION OF THE IRC OR APPLICABLE LOCAL CODE.
- ALL BATHTUB AND SHOWER FLOORS AND WALLS ABOVE BATHTUBS WITH INSTALLED SHOWER HEADS AND IN SHOWER COMPARTMENTS SHALL BE FINISHED WITH A NON-ABSORBENT SURFACE. SUCH WALL SURFACES SHALL EXTEND TO A HEIGHT NOT LESS THAN 72" ABOVE THE FLOOR PER THE CURRENTLY ADOPTED EDITION OF THE IRC OR APPLICABLE LOCAL CODE.
- PROVIDE THERMO-PLY SHEATHING AND BATT INSULATION FILLING ALL CAVITIES AT EXTERIOR WALLS SURROUNDING TUBS AND SHOWERS.
- SECTION R309.7 SEPARATION REQUIRED. THE GARAGE SHALL BE SEPARATED FROM THE RESIDENCE AND ITS ATTIC AREA BY MEANS OF A MINIMUM 1-HOUR RATED FIRE BARRIER CONSTRUCTED OF FIVE-EIGHTHS INCH (5/8") TYPE X GYPSUM BOARD OR EQUIVALENT APPLIED TO ALL WALLS, CEILINGS AND SUPPORT STRUCTURES, INCLUDING BEAMS AND COLUMNS, OF THE GARAGE. SAID GYPSUM BOARD ASSEMBLY SHALL BE FULLY FIRE TAPED, AND ALL PENETRATIONS THROUGH SAID ASSEMBLY SHALL BE FIRESTOPPED WITH A FIRESTOP SYSTEM LISTED AND APPROVED FOR THE APPLICATION. DUCTS IN A PRIVATE GARAGE AND DUCTS PENETRATING THE WALLS OR CEILINGS SEPARATING THE DWELLING UNIT FROM THE GARAGE SHALL BE ENCAPSULATED IN CONSTRUCTION EQUAL TO THAT OF THOSE WALLS AND CEILINGS, AND SHALL HAVE NO OPENINGS INTO THE GARAGE.
- FOR ADDITIONAL INFORMATION SEE STRUCTURAL DRAWINGS AND NOTES.
- ALL CONCEALED FLOOR/CEILING SPACES WHICH ARE GREATER THAN 500 SQFT SHALL BE DRAFTSTOPPED INTO APPROXIMATELY EQUAL AREAS OF LESS THAN 500 SQFT. (SECTION R302.12 AS AMENDED)
- ALL DOORS FROM THE GARAGE TO THE RESIDENCE SHALL BE A MINIMUM 3/4 HOUR FIRE RATED DOOR AND BE SELF-CLOSING AND LATCHING. (SECTION R309.6 AS AMENDED)
- FLEXIBLE METALLIC AIR DUCTS MAY BE USED ONLY WHERE PRACTICAL DIFFICULTIES ARE ENCOUNTERED AND IS SUBJECT TO REVIEW AND APPROVAL BY THE BUILDING OFFICIAL PRIOR TO INSTALLATION. (SECTION M1601.1.1.1 AS AMENDED)
- PROVIDE COMBUSTION AIR FOR ALL FUEL GAS APPLIANCES INCLUDING THE CLOTHES DRYER. IN COMPLIANCE WITH SECTION G2407. THE INSTALLATION OF A FULL-LOUVERED DOOR OR TWO AIR TRANSFER GRILLS (MINIMUM 100 SQ. IN. EACH AND LOCATED WITHIN 12" OF THE FLOOR AND CEILING) IS CODE COMPLIANT.
- PROVIDE COMBUSTION AIR FOR ALL FUEL GAS APPLIANCES IN THE MECHANICAL ROOM INCLUDING THE FURNACE (UNLESS OBTAINING ALL COMBUSTION AIR FROM THE OUTDOORS AND THE WATER HEATERS IN COMPLIANCE WITH SECTION G2407. THE INSTALLATION OF A FULL-LOUVERED DOOR OR TWO AIR TRANSFER GRILLS (MINIMUM 100 SQ. IN. EACH AND LOCATED WITHIN 12" OF THE FLOOR AND CEILING) IS CODE COMPLIANT. IF COMBUSTION AIR DUCTS FROM THE EXTERIOR ARE PROVIDED TO THE ROOM, THEN NOTE SECTION R402.4.4 OF THE INTERNATIONAL ENERGY CONSERVATION CODE.

2.1, 2.3, 2.13



THIRD FLOOR PLAN - 4" WALLS

SCALE: 1/4" = 1'-0"
NOT TO SCALE



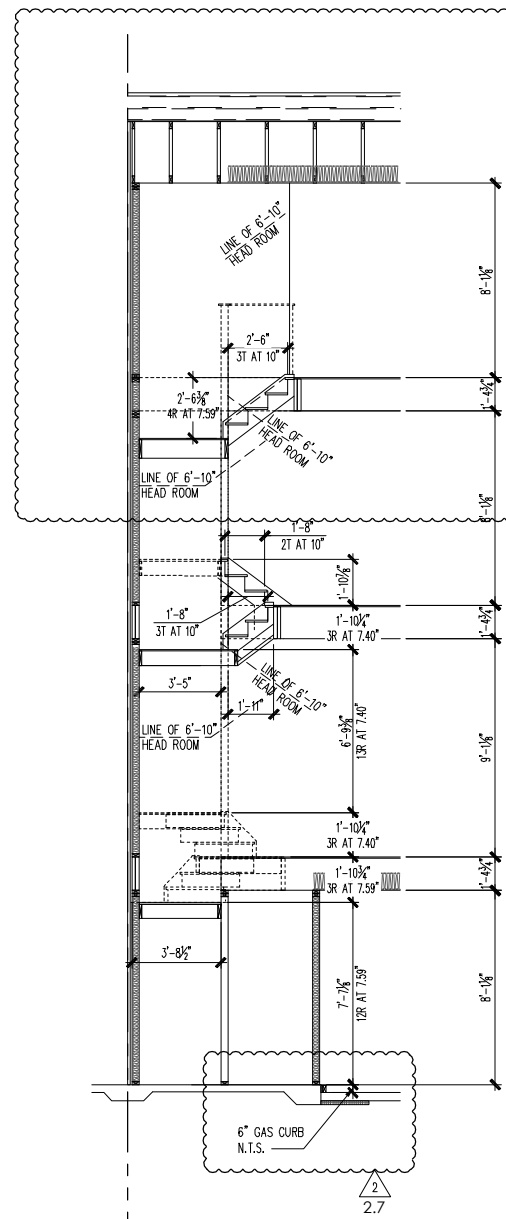
Third Floor Plan
4" Exterior Walls

REV #	DATE / DESCRIPTION
1	10/04/2016 PERMIT COMMENTS
2	10/14/2016 PERMIT COMMENTS
3	12/22/2016 PLAN REVISIONS

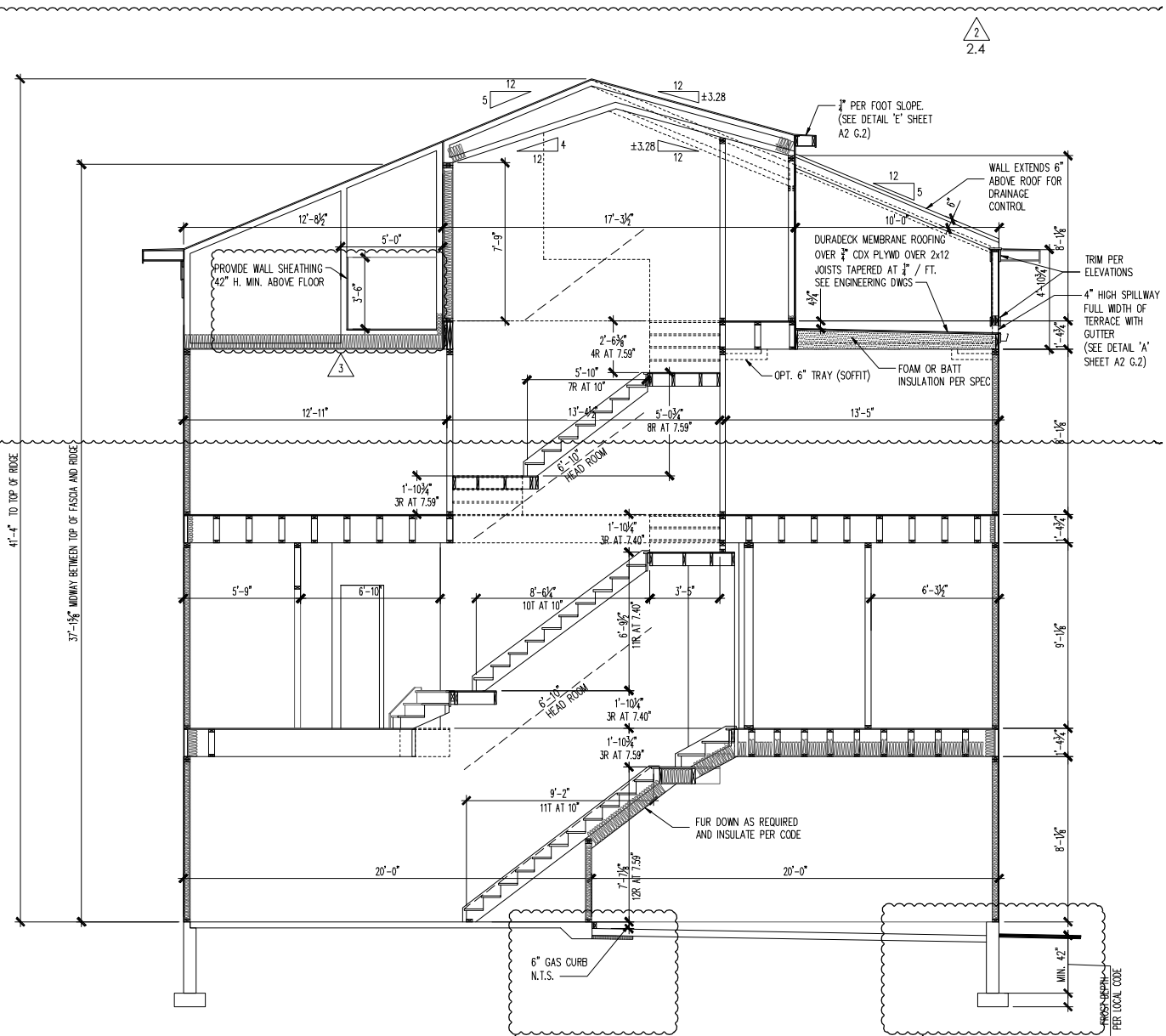
GARAGE HANDING
RL-GE-KR

PLAN NAME
22' Unit
 PHS PLAN NUMBER
2466.913
 LAWSON PLAN ID

SHEET
A1
4-3.1



2 BLDG SECTION - 8/9/8/8' - FRONT LOAD - GRADE-LEVEL - HABITABLE ATTIC
SCALE: 1/4" = 1'-0" "NOT TO SCALE"



1 BUILDING SECTION - 8/9/8/8' - REAR LOAD - GRADE-LEVEL - HABITABLE ATTIC
SCALE: 1/4" = 1'-0" "NOT TO SCALE"

NOTE: SCALES NOTED ON DRAWINGS RELATE TO FULL SIZE PLOTS ON 22x34 SHEETS - 11x17 SHEETS REPRESENT 1/2 SCALE PLOTS

PRODUCTION MANAGER	EM / ER
INITIAL RELEASE DATE:	05/31/2016
CURRENT RELEASE DATE:	12/09/2016

REV #	DATE	DESCRIPTION
1	10/04/2016	PERMIT COMMENTS
2	10/14/2016	PERMIT COMMENTS
3	12/22/2016	PLAN REVISIONS

GARAGE HANDING
RL-GE-KR

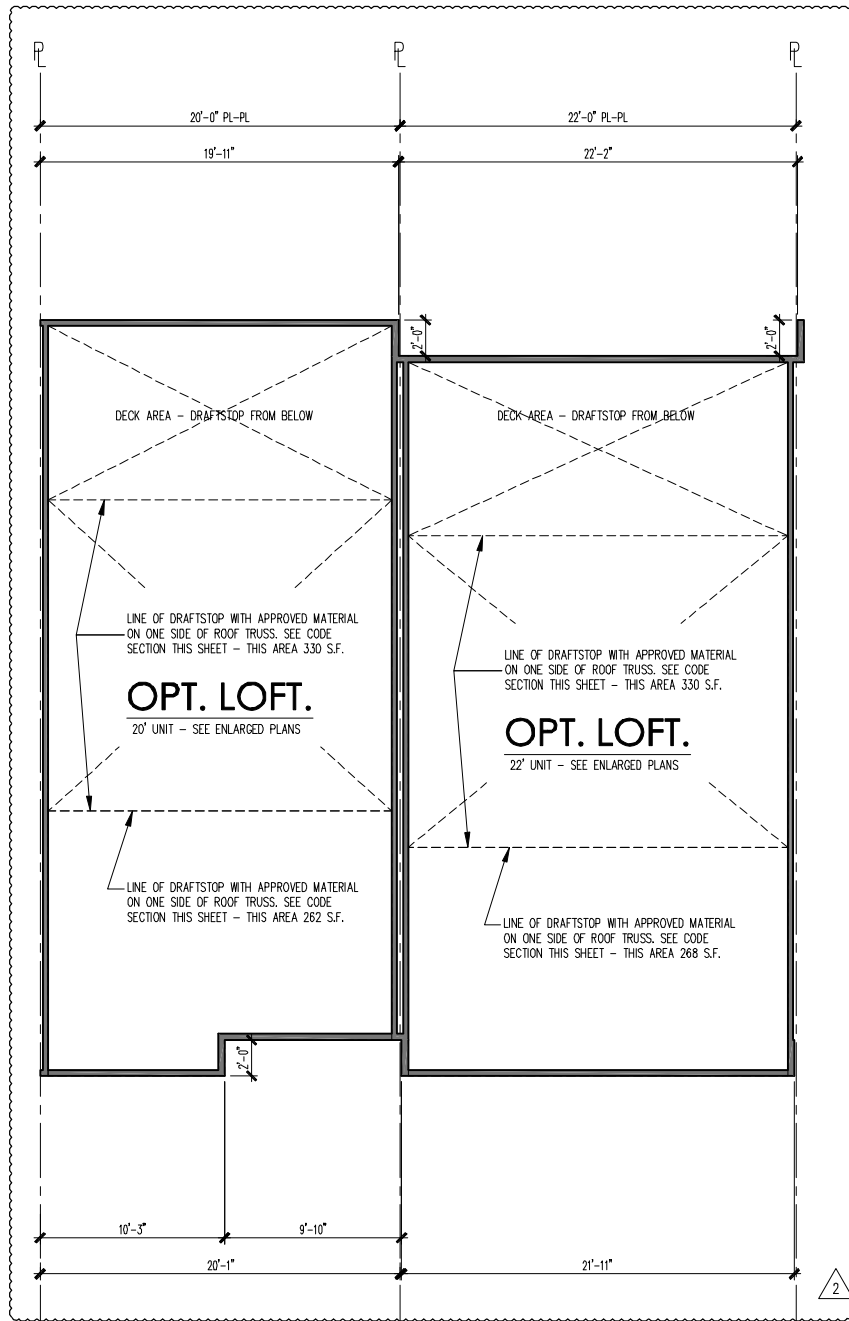
PLAN NAME
22' Unit
NPS PLAN NUMBER
2466.913
LAWSON PLAN ID

SHEET
A2
8-HA-G.1

Illinois/Missouri Division
1900 Golf Road, - Suite 300
Schaumburg, Illinois 60173



Building Sections 1 and 2
Habitable Attic - Grade-Level Entry - Rear Load
Slab Foundation



TYPICAL OPT. LOFT FLOOR PLAN - THIRD FLOOR PLAN

SCALE: 3/16" = 1'-0"
"NOT TO SCALE"

CONTROL PLAN NOTE

REFER TO THE ENLARGED FLOOR PLANS AS ELEVATIONS FOR MORE DETAILED INFORMATION OF EACH UNIT(S).

R302.12.1 MATERIALS. DRAFTSTOPPING MATERIALS SHALL NOT BE LESS THAN 1/2-INCH (12.7 MM) GYPSUM BOARD, 3/8-INCH (9.5 MM) WOOD STRUCTURAL PANELS OR OTHER APPROVED MATERIALS ADEQUATELY SUPPORTED. DRAFTSTOPPING SHALL BE INSTALLED PARALLEL TO THE FLOOR FRAMING MEMBERS UNLESS OTHERWISE APPROVED BY THE BUILDING OFFICIAL. THE INTEGRITY OF THE DRAFTSTOPS SHALL BE MAINTAINED.

PRODUCTION MANAGER
EM/ER
INITIAL RELEASE DATE:
05/31/2016
CURRENT RELEASE DATE:
12/09/2016

REV #	DATE / DESCRIPTION
△ 1	10/04/2016 PERMIT COMMENTS
△ 2	10/14/2016 PERMIT COMMENTS
△ 3	12/22/2016 PLAN REVISIONS
△ 4	
△ 5	
△ 6	
△ 7	
△ 8	
△ 9	
△ 10	

GARAGE HANDING
RL-GE-KR / KC

PLAN NAME
NPC PLAN NUMBER
LAWSON PLAN ID
SHEET
CP-5B
32



Building Control Plan
Third Floor Plan - Typical Opt. Loft Floor Plan
Units 1-5

Illinois/Missouri Division
1900 Golf Road, - Suite 300
Schaumburg, Illinois 60173