TOWN OF MANCHESTER
PLANNING AND ZONING COMMISSION

January 22, 2025 — Lincoln Center Hearing Room, 494 Main Street
7:00 P.M. — Or virtually, via Zoom

AGENDA

This meeting will be held both in person and virtually, via Zoom. The meeting will be shown live on Cox Channel 16 and streamed live at http://www.channel16.org/CablecastPublicSite/watch/1?channel=1. Individuals who wish to speak at or attend the virtual meeting must complete a Request to Attend Virtually form, available at https://manct.us/meeting, by 4:00 p.m. on the day of the meeting. These individuals will need to join the Zoom meeting and will be allowed to speak when directed by the Chairperson. Zoom meeting information will be sent to individuals who complete a Request to Attend Virtually form. Only individuals who complete a Request to Attend Virtually form will be allowed to join the Zoom meeting. A physical location and electronic equipment will be provided for the public to use if a written request is received at least 24 hours in advance, via email to pzccomments@manchesterct.gov, or by mail to the Planning Department, 494 Main Street, P.O. Box 191, Manchester, CT 06045-0191.

PUBLIC HEARINGS:

1. **RAMIL, LLC** – Planned Residential Development (PRD) Zone Change and Preliminary Site Plan for 53 multi-family units in two buildings on 7.69 acres at 708 Hilliard Street and 76R Wedgewood Drive, Rural Residence, Industrial, and Residence A zones.
    - PRD Zone Change & Preliminary Site Development Plan (PRD-0003-2024)

NEW BUSINESS:

1. **RAMIL, LLC** – Planned Residential Development (PRD) Zone Change and Preliminary Site Plan for 53 multi-family units in two buildings on 7.69 acres at 708 Hilliard Street and 76R Wedgewood Drive, Rural Residence, Industrial, and Residence A zones.
    - PRD Zone Change & Preliminary Site Development Plan (PRD-0003-2024)

2. **TOWN OF MANCHESTER PUBLIC WORKS DEPT** – Streetscape and public space improvements at 140, 153, 160, and 163 Spruce Street and a portion of the Spruce Street right-of-way.
    - Erosion & Sedimentation Control Plan (ESC-0010-2024)

3. **ADMINISTRATIVE REPORTS**
    - Upcoming Training Opportunities

4. **APPROVAL OF MINUTES**
    - January 6, 2025 – Public Hearing/Business Meeting/Aquifer Protection Agency

5. RECEIPT OF NEW APPLICATIONS

6. ITEMS FOR FUTURE AGENDAS

TOWN OF MANCHESTER
LEGAL NOTICE

The Planning and Zoning Commission will hold a public hearing on January 22, 2025 at 7:00 P.M., both virtually and in person in the Lincoln Center Hearing Room, 494 Main Street, Manchester, Connecticut, to hear and consider the following petition:

RAMIL, LLC – PRD Zone Change & Preliminary Site Development Plan (PRD-0003-2024) – Planned Residential Development (PRD) Zone Change and Preliminary Site Plan for 53 multi-family units in two buildings on 7.69 acres at 708 Hilliard Street and 76R Wedgewood Drive, Rural Residence, Industrial, and Residence A zones.

At this hearing interested persons may be heard, either in person or virtually via Zoom, and written communications received. This meeting will be shown live on Cox Channel 16 and streamed live at http://www.channel16.org/CablecastPublicSite/watch/1?channel=1. Individuals who wish to speak at or attend the virtual meeting must complete a Request to Attend Virtually form, available at https://manct.us/meeting, by 4:00 p.m. on the day of the meeting. These individuals will need to join the Zoom meeting and will be allowed to speak when directed by the Chairperson. Zoom meeting information will be sent to individuals who complete a Request to Attend Virtually form. Only individuals who complete a Request to Attend Virtually form will be allowed to join the Zoom meeting. A physical location and electronic equipment will be provided for the public to use if a written request is received at least 24 hours in advance, via email to pzccomments@manchesterct.gov, or by mail to the Planning Department, 494 Main Street, P.O. Box 191, Manchester, CT 06045-0191.

Individuals may also submit comments in writing to the Planning and Economic Development Department via email to pzccomments@manchesterct.gov, or by mail to the Planning Department, 494 Main Street, P.O. Box 191, Manchester, CT 06045-0191. All written comments received by 4:00 p.m. on the day of the meeting will be presented and recorded as part of the hearing.

A copy of the proposed zoning district change may be reviewed online at https://www.manchesterct.gov/Government/Departments/Planning-and-Economic-Development; by contacting the Town Clerk's office at townclerkdept@manchesterct.gov or (860) 647-3037 to request a PDF by email; or in the Planning and Economic Development Department, 494 Main Street, during business hours (8:00 a.m. to 4:30 p.m. on Mondays, Wednesdays, and Thursdays; 8:00 a.m. to 7:00 p.m. on Tuesdays; and 8 a.m. to 1:00 p.m. on Fridays). Information about this application will be available online at https://Manchesterct.gov/pzc by the Friday before the hearing.

Planning and Zoning Commission
Eric Prause, Chair

TOWN OF MANCHESTER
PLANNING AND ECONOMIC DEVELOPMENT DEPARTMENT

TO: Planning & Zoning Commission

FROM: Megan Pilla, Principal Development Planner MP

DATE: January 17, 2025

RE: Ramil, LLC – 708 Hilliard Street & 76R Wedgewood Drive
PRD Zone Change – Preliminary Site Plan (PRD-0003-2024)

Introduction

The applicant is requesting approval of a Preliminary Site Development Plan and a zone change from Rural Residence, Industrial, and Residence A to Planned Residential Development (PRD) zone at 708 Hilliard Street and 76R Wedgewood Drive.

[*NOTE: The submitted project narrative describes the site as a single parcel because the applicant intends to merge the two parcels into one*.]

Project Description

The approximately 7.69-acre site currently contains an unoccupied single-family house with a detached garage and unpaved driveway, and is otherwise undeveloped and mostly forested. The site is bounded by Hilliard Street to the north, with a steep slope separating the buildable portion of the site from the street. Two (2) apartment complexes are adjacent to the west, and several single-family residences are adjacent to the south/southeast. To the east/northeast, the site is partially bounded by Bigelow Brook and a Town-owned open space parcel which is mostly forested, as well as the Hilliard Mills commercial complex (which is also separated from the buildable area of the subject site by steep slopes).

Several different zoning designations exist in the surrounding area, including residential, commercial, and industrial zones. See the attached Location Map for nearby zoning boundaries.

The applicant is proposing a 53-unit multi-family housing development consisting of two (2) 3-story buildings. The existing access driveway off of Middle Turnpike West to the south would be improved and lead to a parking lot with a total of 106 parking spaces, with ADA accessible spaces located in front of each building. Concrete sidewalk is shown along the access drive and throughout the development, providing pedestrian access to all parking areas and two (2) designated outdoor recreation areas.

The attached architectural plans show that the first floor of each building would consist primarily of amenities (the details of which would be finalized in a future Detailed Site Plan application) with most of the residential units on the second and third floors. Units are a mix of 1- and 2-bedroom apartments. The architectural elevations and renderings show individual unit balconies on the second and third floors.

Open Space & Landscape

Multi-family residential developments in the PRD zone are required to provide usable outdoor recreation area for residents at a ratio of 500 sq. ft. per dwelling unit. With 53 units proposed, a minimum of 26,500 sq. ft. of recreation area is required. The proposed site plan shows two (2) designated recreation areas on the west side of the site – one (1) to the south of the parking lot and the other to the north, totaling 27,950 sq. ft. Specific uses and layout of the recreation areas are not required for approval of a Preliminary Site Plan; additional details will be required when a future Detailed Site Plan is submitted.

The zoning regulations require a "landscaped border of not less than 15 ft. in width adjacent to and parallel to all sides of the site except points of entry." The proposed limits of clearing (highlighted in orange on the attached site plan) show that a 75-ft. natural wooded border would remain along most of the property lines; in the areas where earthwork requires clearing closer to the property lines, staff recommends the planting of new trees and shrubs to fill in the landscaped border as much as possible to maintain privacy for neighbors. That level of detail should be shown in a future Detailed Site Plan submission.

A 6-ft. high vinyl privacy fence is shown on both sides of the entrance driveway (highlighted in green on the attached site plan) which continues up the western property line to the point where the nearest apartment building of the adjacent complex is closest to the property line.

Traffic, Access & Parking

A single access driveway is shown off of Middle Turnpike West where an unpaved driveway currently exists; residents of the development would enter and exit at this location. Although the parcel frontage at this location is only about 19 ft. wide, an existing access and utility easement over the adjacent properties to the west provides enough space for the required 24-ft. wide driveway, as well as the sidewalk and privacy fencing.

Driveway entrance from Middle Turnpike West – existing conditions

A vehicular connection to Hilliard Street is not proposed due to the steep slopes on the north side of the site.

The 106 proposed parking spaces exceed the minimum requirement for a 53-unit development in the PRD zone, which is 83 spaces. Staff would encourage a reduction in parking spaces if practicable, to reduce the total amount of impervious surfaces and maximize green space (whether naturally vegetated or maintained as recreation space).

A traffic impact statement provided by Solli Engineering indicates that the proposed development is expected to generate approximately 21-22 vehicle trips to and from the site during each peak hour (weekday A.M., weekday P.M, and Saturday midday). The report concludes that the development is not anticipated to have a significant impact on traffic in the surrounding roadway network.

Utilities

The site is proposed to be served by Town water and sanitary sewer via new connections to the main lines under Middle Turnpike West. Based on the anticipated utility demands provided in a utility impact statement by Civil 1 Engineers, it is expected that the increase in demand can be accommodated by the exiting mains.

Electric and gas services would also be installed off of Middle Turnpike West.

Stormwater

The proposed stormwater management system includes catch basins in the paved parking lot which will discharge to three (3) stormwater infiltration basins spread throughout the development (highlighted in blue on the attached site plan). Overflow from the two (2) basins at the northeastern portion of the site would outlet through an outlet control structure into a 55-ft. long level spreader to reduce flow velocity, with the goal of allowing sheet flow beyond that point to mimic the existing flow of stormwater downhill. Overflow from the basin on the west side of the site would outlet to a vegetated swale to the south, the design of which, the applicant states, will be finalized in a future Detailed Site Plan.

Runoff from the southern portion of the entrance driveway will be routed into the existing stormwater system on Middle Turnpike West, and a small underground detention system is shown adjacent to the northern portion of the driveway.

PRD Zone Change & Preliminary Site Plan

The applicant has elected to pursue approval for the zone change and Preliminary Site Plan only at this time. Submission and approval of a Detailed Site Plan will be required before construction can begin. The applicant is aware that, in accordance with Article II, Section 7.06 of the zoning

regulations, the zoning of the parcel will revert to its former zone if an approved Preliminary Site Plan expires.

Staff Review

Town staff has reviewed the plans and documents submitted with the application and an update on the status of outstanding comments will be provided at the January 22, 2025 meeting.

mp
R:\Planning\PZC\2025\01 - January 22\Packet\PRD-0003-2024 (708 Hilliard) - Memo.docx
Attach.

Town of Manchester, CT

Geographic Information Systems

708 HILLIARD ST & 76R WEDGEWOOD DR

Legend

Zoning

- GB - General Business
- IND - Industrial
- PRD - Planned Residence Development
- RA - Residence A
- RB - Residence B
- RM - Residence M
- RR - Rural Residence

NOTES:
Planimetric and topographic information were compiled by stereo photogrammetric methods from photography dated April 24, 1999 in accordance with ASPR accuracy standards for 1"=40' large scale Class I maps. Real property compiled from recorded deeds, subdivision plans and other public records. Utility networks compiled from record plans, as-builts and/or field survey data. Aerial photography dated April 24, 1999.

0 50 100 200 300 400 Feet

1 inch = 300 ft

Date: 1/14/2025

November 11, 2024

Megan Pilla, PLA, ASLA, AICP
Principal Development Planner
Planning & Zoning Department
Town of Manchester
41 Center Street
Manchester, Connecticut 06045

RE: Proposed Zone Change – Planned Residential Development Zone
708 Hilliard Street
Manchester, Connecticut 06045
Sky View Apartments

Dear Ms. Pilla,

Please find enclosed an application for a Zone change for the property located at 708 Hilliard Street, Manchester, Connecticut. The 7.69-acre parcel is currently in the Industrial (IND) and Rural Residence (RR) Zones and seeks to change the zone of the property to a Planned Residential Development Zone. The project proposes two apartment buildings, each three stories in size, with a total of 53 multifamily housing units split between the two buildings. The proposed development provides 106 parking spaces (2 per unit), and will be accessed from West Middle Turnpike via a twenty-four-foot-wide driveway. The proposed development features multiple stormwater basins, and both buildings will be connected to existing gas, electric, water and sewer infrastructure within West Middle Turnpike.

The proposed development will not have a negative impact on the town water supply, drainage or sanitary sewer systems. The estimated development flows have been sent to Town officials to verify capacity within the existing sanitary sewer and water systems and preliminary conversations have indicated such capacities exist. The proposed stormwater onsite is to be treated via the three proposed stormwater basins. These will increase stormwater quality and reduce peak stormwater runoff flows. The conservation measures to be utilized in the development of the site to minimize erosion and sedimentation include silt fence, anti-tracking pads (Construction entrance), erosion control blankets, sediment traps and the preservation of significant portions of the property as natural/wooded area. The natural/wooded area being preserved includes 1000' on multiple sides of the proposed buildings.

In accordance with the Town of Manchester Zoning Regulations, the development of the planned residential project will preserve significant natural features of the site, including trees, slopes and a minimum 100' natural/wooded buffer on multiple sides of the proposed buildings. There is a significant housing shortage across the Town and State, and the proposed development will provide housing for a moderate cost - making it easier for young professionals, families, and seniors to find suitable living arrangements within the community. The large recreation and landscaped areas foster a sense of community and encourage social interaction among residents. The project team is in strong belief the development will be a welcoming addition to the Town.

Included as part of this application is a Schematic Design: Site Layout (Preliminary Plan), architectural floor plans and rendering, and a traffic impact assessment.

Please feel free to contact us if you have any further questions. We look forward to working with you on this Application.

CIVIL 1
Civil Engineers

November 11, 2024

Megan Pilla, PLA, ASLA, AICP
Principal Development Planner
Planning & Zoning Department
Town of Manchester
41 Center Street
Manchester, Connecticut 06045

RE: Planned Residential Development – Utility Impact Statement
708 Hilliard Street
Manchester, Connecticut 06045
Sky View Apartments

Dear Ms. Pilla,

Please find enclosed schematic site plans for the property located at 708 Hilliard Street, Manchester, Connecticut. The project proposes two apartment buildings, each three stories in size, with a total of 53 multifamily housing units split between the two buildings. The proposed development features multiple stormwater basins, and both buildings will be connected to existing gas, electric, water and sewer infrastructure within West Middle Turnpike. Please see below preliminary sanitary sewer flow estimates. Based on these flow estimates, the estimated design flow is minimal and therefore will have no significant impact on town facilities based on conversation with Bernard Kalansuriya, P.E..

SEWAGE FLOW ESTIMATES

	BUILDING 1	**BUILDING 2**
APARTMENT UNITS	25	28
1 BEDROOM UNITS	17	20
2 BEDROOM UNITS	8	8
TOTAL # OF BEDROOMS	33	36
FLOWS PER CT HEALTH CODE	33 BR * 150 GPD = 4,950 GPD	36 BR * 150 GPD = 5,400 GPD
TOTAL FLOWS	4,950 + 5,400 = 10,350 GPD	

Please feel free to contact us if you have any further questions. We look forward to working with you on this Application.

Sincerely,
CIVIL 1

Sean Quinlan

Sean Quinlan
Project Engineer

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CIVIL 1
Civil Engineers

The proposed stormwater runoff onsite is to be treated via the three proposed stormwater basins and an underground stormwater system. Two stormwater basins are proposed along the northeastern portion of the proposed development, while one is proposed along the western portion of the proposed development. These stormwater basins will be designed to capture, treat and reduce stormwater peak flows in accordance with the 2024 Connecticut Stormwater Quality Manual. The basins will be designed to handle flows up to the 100-year storm event, and provide 1-foot of freeboard in accordance with the regulations. The basins will infiltrate the stormwater runoff from the proposed development and improve the stormwater quality. The project will incorporate low impact development techniques such as protecting as much undisturbed natural space as possible, minimizing land disturbance, including providing a minimum 100' buffer from the proposed buildings to the property lines, providing low maintenance, native vegetation that encourages water retention and minimizes uses of fertilizers and pesticides, and infiltrating precipitation as close as possible to the point it reaches the ground, noted by the use of three smaller basins as opposed to one larger stormwater basin.

The overflow from the two stormwater infiltration basins along the northeastern edge of the proposed development will outlet through an outlet control structure to help control peak runoff rates before flowing to a 55' long level spreader. This level spreader will spread the outletting flows across a significant distance, mimicking sheet flow across the hillside as is present in existing conditions. This water will eventually end up in Bigelow Brook before exiting off the property.

The overflow from the stormwater infiltration basin in the western portion of the property will naturally disperse to the south through a vegetated swale. This swale will be designed during the full design and permitting process. Stormwater flows in the area will be treated, infiltrated and reduced as previously mentioned. A portion of the entering driveway stormwater runoff will be routed to the existing stormwater system within Middle Turnpike West. This stormwater runoff flow will be reduced by the addition of strategically placed underground stormwater chambers alongside the entrance driveway. All of the proposed catch basins will be deep sump catch basins, which will help improve water quality on the site.

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November 04, 2024
Revised: December 20, 2024

Mr. Chris Pawlowski
Project Manager
Civil 1
Chris@civil1.com

RE: Traffic Impact Assessment
Sky View Apartments
708 Hilliard Street
Manchester, Connecticut, 06042
Project Number: 24116201

Dear Mr. Pawlowski,

Solli Engineering, LLC has prepared this assessment to provide an analysis of the potential traffic impacts associated with the proposed development located at 708 Hilliard Street in Manchester, Connecticut. The evaluation has been completed in accordance with the Town of Manchester requirements as well as standard traffic engineering methodology. Our investigation concludes that the proposed development will not have an adverse impact on the area roadway network.

Project Description:

The project site, known as 708 Hilliard Street, consists of approximately 7.69 acres, located in the RR/Industrial zone with a proposed zone change to the PRD zoning district within the Town of Manchester. The property is currently undeveloped, and the site is to be improved with two residential buildings, consisting of a total of 53 residential units. The proposed development will be accessed via a driveway onto Middle Turnpike West. The site is bound by Hilliard Street to the north, Middle Turnpike West to the south and residential developments to the east and west. Refer to Figure 1, Site Location Map, for more details on the proposed development location.

Existing Conditions:

In the vicinity of the proposed development, Middle Turnpike West is an east-west roadway with a posted speed limit of 35 miles per hour throughout the study area. The portion of Middle Turnpike West in the study area is classified as a minor arterial by the Connecticut Department of Transportation (CTDOT) and is under the jurisdiction of the Town of Manchester. Throughout the study area, Muddle Turnpike West is a two-lane bidirectional roadway with approximately 12-foot lanes, with 9-foot shoulders and a striped double solid yellow centerline. Sidewalks are also present on Middle Turnpike West along both travel lanes throughout the study area. An automatic traffic recorder (ATR) was installed on Middle Turnpike West near the proposed site driveway in October 2024. Based on the ATR data, the 85th percentile speed is 43 miles per hour eastbound and 44 miles per hour westbound along Middle Turnpike West. The ATR speed and volume data is included as a supporting document to this assessment. Local bus service from CT Transit Route 88 is offered along Middle Turnpike West with a bus stop provided approximately 200 feet west of the proposed site driveway. No credit was taken for utilization of public transit associated with this development resulting in a conservative analysis.

Traffic volume data during the weekday AM, weekday PM and Saturday midday peak hours along Middle Turnpike West was obtained from the ATR data. The proposed development is located within a half mile of

three existing schools; Howell Cheney Technical High School, East Catholic High School, and Odyssey Charter School therefore, the weekday PM peak hour occurred from 3:15 PM to 4:15 PM. The existing traffic volumes are illustrated on Figure 2, included as a supporting document to this assessment.

Safety Analysis:

Crash data was obtained from the Connecticut Crash Data Repository for the three most recent years of available data (October 2021 – October 2024) for the roadway segment of Middle Turnpike West between the intersection of New State Road and Edgewood Drive. There was a total of 4 crashes identified along the corridor in the aera of study, none of which resulted in fatalities. One (1) crash resulted in injury and three (3) crashes resulted in property damage only. Out of the four (4) total crashes, one (1) was an angle accident and three (3) were classified as other, over the three-year period. Overall, the safety assessment identified no accident patterns or geometric deficiencies that would warrant mitigation. Based on the review of the accident data, the main cause of the accidents was from operator error. A summary of the accident data is provided as a supporting document to this study as, Crash Analysis Summary.

Proposed Conditions:

The development proposes to be access via a stop-controlled driveway on Middle Turnpike West between the intersection of Edison Road and Wedgewood Drive. See the Schematic Design: Site Layout, prepared by Civil 1, included as a supporting document to this assessment, for additional detail on the proposed site layout.

Intersection sight distance (ISD) at the site driveway was evaluated per guidance provided in the 2023 edition of the CTDOT Highway Design Manual. ISD was reviewed based on a STOP-controlled approach with free-flowing main line traffic. Based on the recent 85th percentile speed data obtained from the ATR of 43 miles per hour on Middle Turnpike West eastbound and 44 miles per hour on Middle Turnpike West westbound, a minimum ISD of 486 feet is required looking left and a minimum ISD of 474 feet is required looking right for passenger vehicles exiting the site driveway. Under the proposed condition, the intersection sight distances looking both left and right from the site driveway provide the minimum required distance. See the Intersection Sight Distance Figure, included as a supporting document in this assessment, for additional detail on the sight distances.

The proposed development plans were reviewed for internal circulation to ensure that a fire truck can access and circulate the site. The proposed site plan includes sidewalks providing internal connection between parking facilities and the residential buildings as well as sidewalks along the main driveway connecting to sidewalks along Middle Turnpike West. Refer to Figure TT-1 included as a supporting document to this assessment.

The anticipated number of trips that will be generated by the proposed development was estimated using data from the Institute of Transportation Engineers (ITE) Trip Generation, 11th Edition. The proposed trip generation is based on an independent variable of dwelling units for the Land Use Code (LUC) 220 – Multifamily Housing (Low-Rise). The trip generation was calculated for the weekday AM, weekday PM, and Saturday midday peak hours of adjacent street traffic based on the proposed land use, as these peak periods are the times of day with the greatest potential for impact on the adjacent street traffic. LUC 220 is defined by ITE as "Low-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have two or three floors (levels)." LUC 220 was utilized for this site as it best conforms with the ITE Land Use Code definition, as presented. The proposed development is expected to generate 21 new trips (5 entering, 16 exiting) during the weekday AM peak hour, 21 new trips (14 entering, 7 exiting) during the weekday PM peak hour, and 22 new trips (11 entering, 11 exiting) during the Saturday midday peak hour. Table 1 illustrates the anticipated trips to be generated by the proposed development during the various peak hours. A detailed

breakdown of the proposed trip generation calculations and ITE trip generation rate sheets are provided as supporting documents to this assessment.

TABLE 1
PROPOSED TRIP GENERATION SUMMARY

LAND USE	WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR			SATURDAY MIDDAY PEAK HOUR		
	ENTE	EXIT	TOTA	ENTE	EXIT	TOTA	ENTE	EXIT	TOTA
LUC 220 Multifamily Housing (Low-Rise)	5	16	21	14	7	21	11	11	22
New Trips	3	16	21	14	7	21	11	11	22

The anticipated distribution of new traffic entering and exiting the site was developed based on area populations, existing traffic patterns, and layout of the adjacent roadway network. The following distributions were applied to the new site generated trips:

- 40% to/from the east via Middle Turnpike West
- 60% to/from the west via Middle Turnpike West

The anticipated percent distribution of the new site generated trips is illustrated in Figure 3. The new site generated trips were assigned to the site driveway intersections based on the anticipated percent distributions from Figure 3, and the resulting trip assignment is illustrated in Figure 4.

The proposed development is anticipated to be completed by 2026. Background traffic growth is estimated to account for traffic increase as a result of regional population and economic growth in the study area. CTDOT ATR data from count station MANC-044 reported an AADT of 13,300 vehicles in 2018 and an AADT of 15,000 in 2012 representing an average annual decrease of 2 percent. The AADT data reported for 2021 at this location was 10,100 representing continued decrease, however this data may have been impacted by the COVID-19 pandemic and therefore was not included in this evaluation. The existing traffic volumes were projected to the 2026 build year using a conservative 1-percent per year growth factor based on historic traffic volume data from CTDOT. The resulting 2026 background traffic volumes are illustrated in Figure 5. CTDOT ATR data is included as a supporting document to the report.

The trip assignment volumes illustrated in Figure 4 were combined with the 2026 background traffic volumes shown in Figure 5 to develop the 2026 build traffic volumes. Figure 6 illustrates the 2026 build traffic volumes.

The Connecticut Department of Transportation was contacted to identify any ongoing or proposed developments within the study area which may impact the analysis. No developments were identified which would impact the analysis.

Capacity Analysis:

To determine the operating conditions of the study area intersection after the proposed development has been constructed, the study area intersection was analyzed using the Synchro 11 capacity analysis software for the existing, background, and build peak hour conditions during the weekday AM, weekday PM, and Saturday midday peak hours.

The results of the Synchro analysis describe the traffic impact in terms of Level of Service (LOS). LOS describes the operational condition of a signalized intersection in terms of delay (in seconds per vehicle) and is expressed on a scale of A through F with LOS A being the best and LOS F being the worst. LOS A reflects intersection operations with little to no vehicle delay (less than 10 seconds per vehicle) and LOS F reflects intersection conditions that are over capacity and experience long delays (more than 50 seconds of delay per vehicle at unsignalized intersections or more than 80 seconds of delay at signalized intersections). At unsignalized intersections, only the delay and the Level of Service on STOP-controlled approaches are reported. Table 2 below summarizes the results of the analysis.

TABLE 2
CAPACITY ANALYSIS SUMMARY
LOS(Delay)
AM/PM/SAT

INTERSECTION	2024 Existing	2026 Background	2026 Build
Site Driveway & Middle Turnpike West* SB – Site Driveway	--/--/--	--/--/--	B(13.4)/B(12.8)/B(11.4)

*Unsignalized Intersection

Under the 2026 build condition, the site driveway & Middle Turnpike West intersection site driveway will operate at a LOS B with 13.4 seconds of delay during the weekday AM peak hour, a LOS B with 12.8 seconds of delay during the weekday PM peak hour, and a LOS B with 11.4 seconds of delay during the Saturday midday peak hour. The site driveway is anticipated to have an 95th percentile queue of less than one vehicle during any of the peak hours indicating adequate gaps in existing traffic on Middle Turnpike West to accommodate the development. At the site driveway, the eastbound approach of Middle Turnpike West has a pavement width of 21 feet (12-foot lane and 9-foot shoulder) which is adequate pavement width to support a by-pass lane.

The traffic impact analysis indicates that the anticipated minor increase in traffic volume associated with the proposed development can be accommodated without adverse impact on the operating conditions of the adjacent roadway network. Copies of the Synchro analysis reports are provided as supporting documents to this assessment.

Conclusion:

A traffic impact analysis of the study area intersection was conducted and indicates that the proposed development can be accommodated without adverse impact on the operating conditions of the study area roadway network. The site is proposed to be developed with 2 buildings with 53 multifamily residential units.

Based on the analysis, 21 new trips are anticipated to be generated during the weekday AM peak hour, 21 new trips are anticipated to be generated during the weekday PM peak hour, and 22 new trips are anticipated to be generated during the Saturday midday peak hour. Under the build condition in the year 2026, the stop-controlled site driveway is expected to operate at a level of service B for exiting vehicles during the weekday AM peak hour, a level of service B for exiting vehicles during the weekday PM peak hour, and a level of service B for exiting vehicles during the Saturday midday peak hour. It is the professional opinion of Solli

Engineering that the traffic anticipated to be generated by the proposed development can be accommodated by the surrounding roadway network. There is no indication that the proposed development will have an adverse impact on the operating conditions of the adjacent roadway network.

If you have any questions or require any additional information, please reach out at your convenience.

Sincerely,
Solli Engineering, LLC

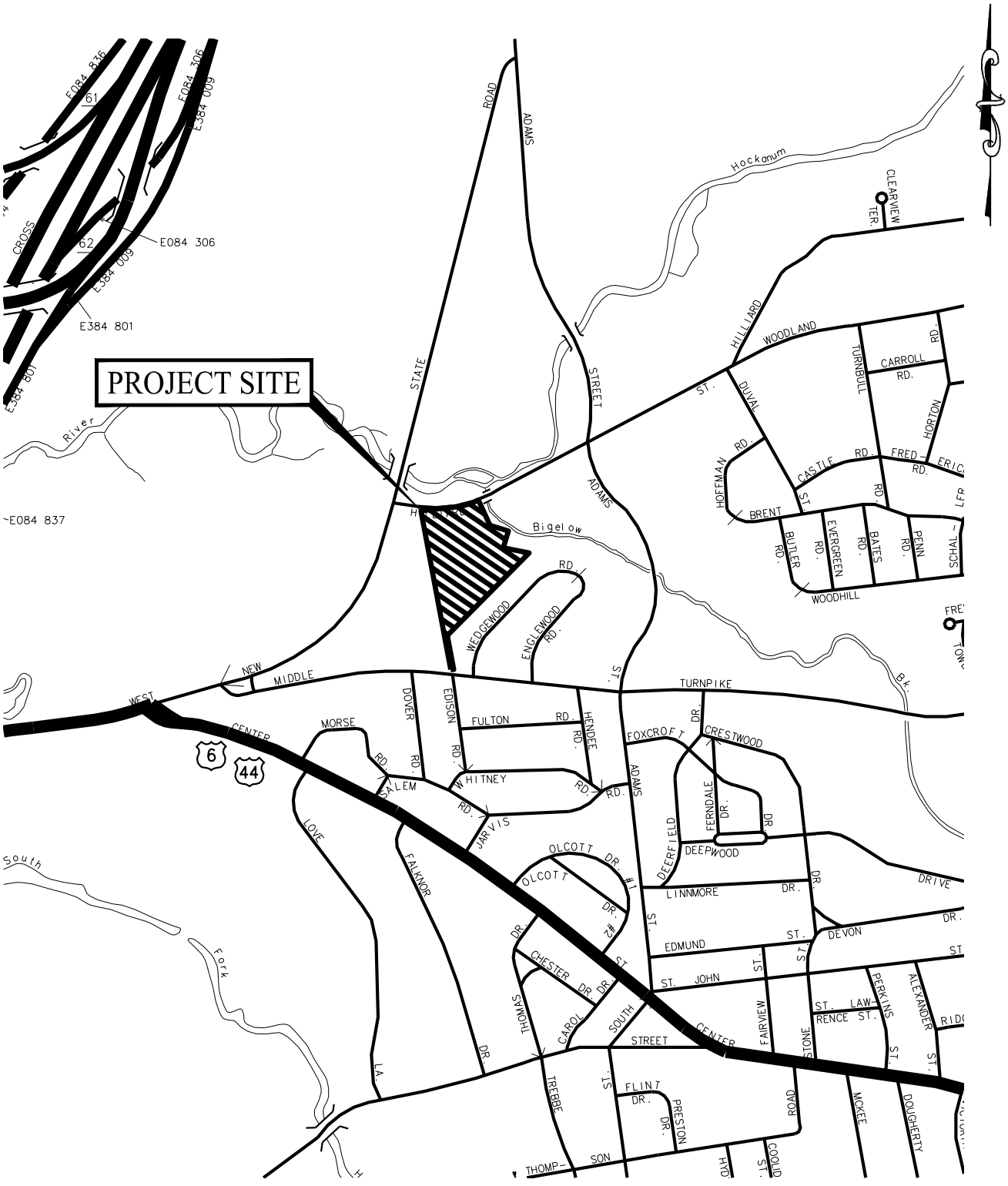
Matt Baldino P.E., PTOE
Project Manager

Kevin Solli, P.E., PTOE
Principal

Supporting Documents:

Site Location Map	(Figure 1)
2024 Existing Traffic Volumes	(Figure 2)
Trip Distribution	(Figure 3)
Trip Assignment	(Figure 4)
2026 Background Traffic Volumes	(Figure 5)
2026 Build Traffic Volumes	(Figure 6)
Intersection Sight Distance	(ISD-1)
Truck Turning Figure	(TT-1)

Peak Hour Trip Generation Summary
ITE Trip Generation Rate Sheets
Accident Data Summary
Synchro Analysis Reports
ATR Speed Data
ATR Volume Data
MANC-044 ATR Volume Data
CT Transit Bus Map 86 / 88 Burnside Avenue



NOTE: BASE MAP INFORMATION TAKEN FROM CT TRU MAP NUMBER 076.

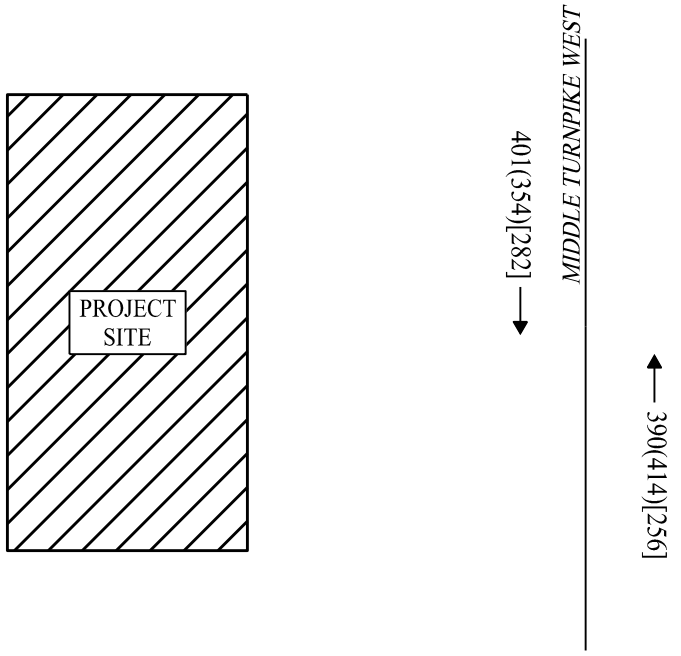
1000 0 500 1000

SOLLI ENGINEERING
MONROE, CT | W. HARTFORD, CT | NORWOOD, MA
SOLLIENGINEERING.COM
T: (203) 880-5455 | F: (203) 880-9695

SITE LOCATION MAP

708 HILLIARD STREET
MANCHESTER, CONNECTICUT

Project #:	24116201
Plan Date:	11/01/24
Scale:	1" = 1000'
Figure:	1



LEGEND

◯	UNSIGNALIZED INTERSECTION
———	EXISTING ROADWAY
←	AM(PM)[SAT]

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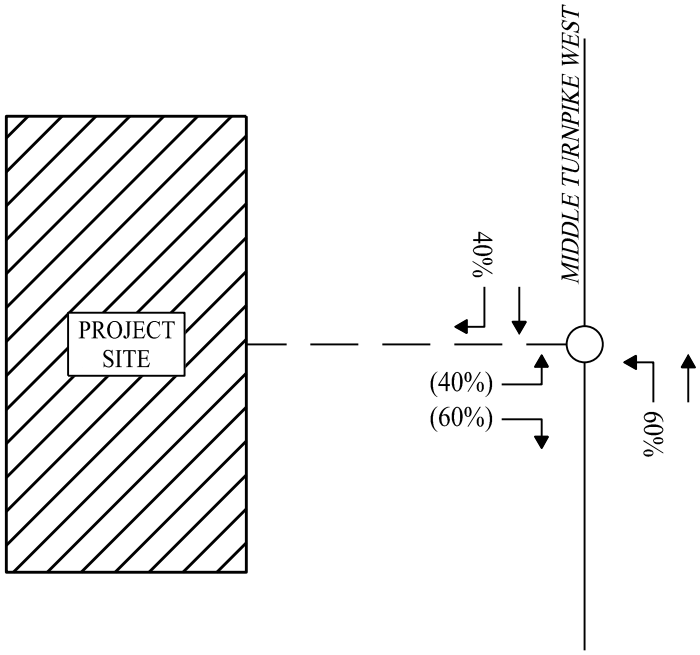
T: (203) 880-5455 | F: (203) 880-9695

2024 EXISTING TRAFFIC VOLUMES

708 HILLIARD STREET
MANCHESTER, CONNECTICUT

Project #:	24116201
Plan Date:	11/01/24
Scale:	NTS
Figure:	2



LEGEND

○	UNSIGNALIZED INTERSECTION
———	EXISTING ROADWAY
— — —	PROPOSED DRIVEWAY
←	ENTER(EXIT)

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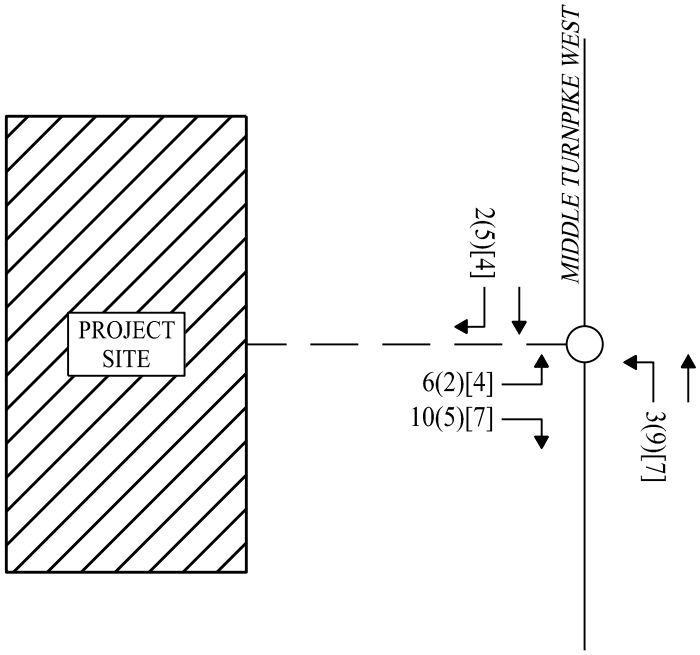
TRIP DISTRIBUTION

708 HILLIARD STREET
MANCHESTER, CONNECTICUT

Project #:	24116201
Plan Date:	11/01/24
Scale:	NTS
Figure:	3



LEGEND

○	UNSIGNALIZED INTERSECTION
———	EXISTING ROADWAY
— — —	PROPOSED DRIVEWAY
←	AM(PM)[SAT]

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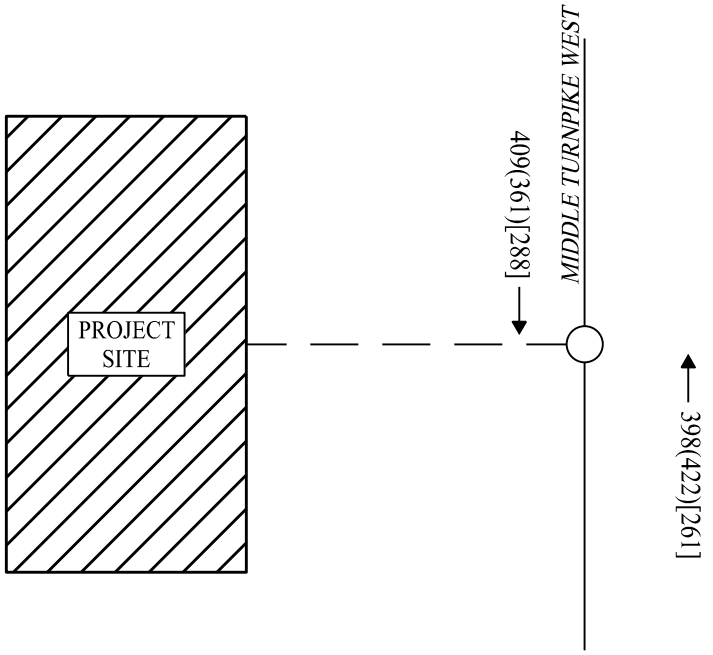
TRIP ASSIGNMENT

708 HILLIARD STREET
MANCHESTER, CONNECTICUT

Project #:	24116201
Plan Date:	11/01/24
Scale:	NTS
Figure:	4



LEGEND

○	UNSIGNALIZED INTERSECTION
———	EXISTING ROADWAY
— — —	PROPOSED DRIVEWAY
←	AM(PM)[SAT]

SOLLI ENGINEERING
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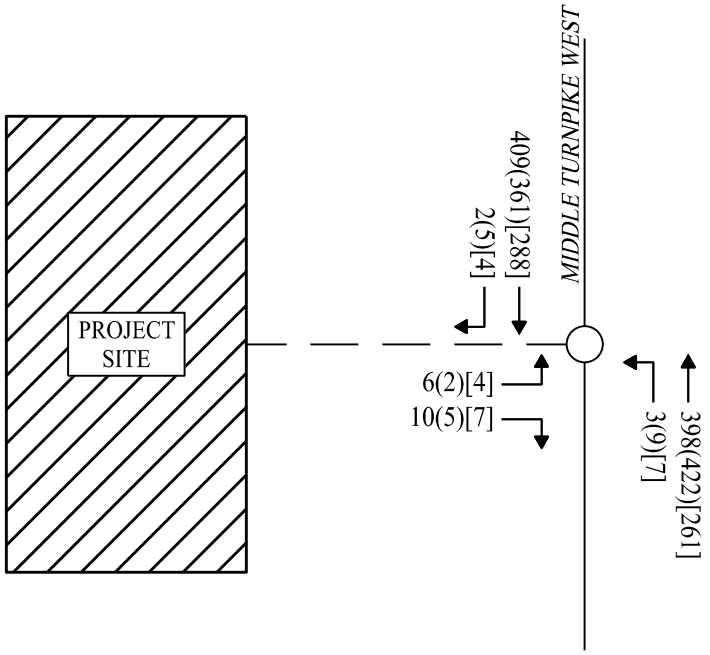
2026 BACKGROUND TRAFFIC VOLUMES

708 HILLIARD STREET
MANCHESTER, CONNECTICUT

Project #:	24116201
Plan Date:	11/01/24
Scale:	NTS
Figure:	5



LEGEND

○	UNSIGNALIZED INTERSECTION
———	EXISTING ROADWAY
— — —	PROPOSED DRIVEWAY
←	AM(PM)[SAT]

SOLLI ENGINEERING
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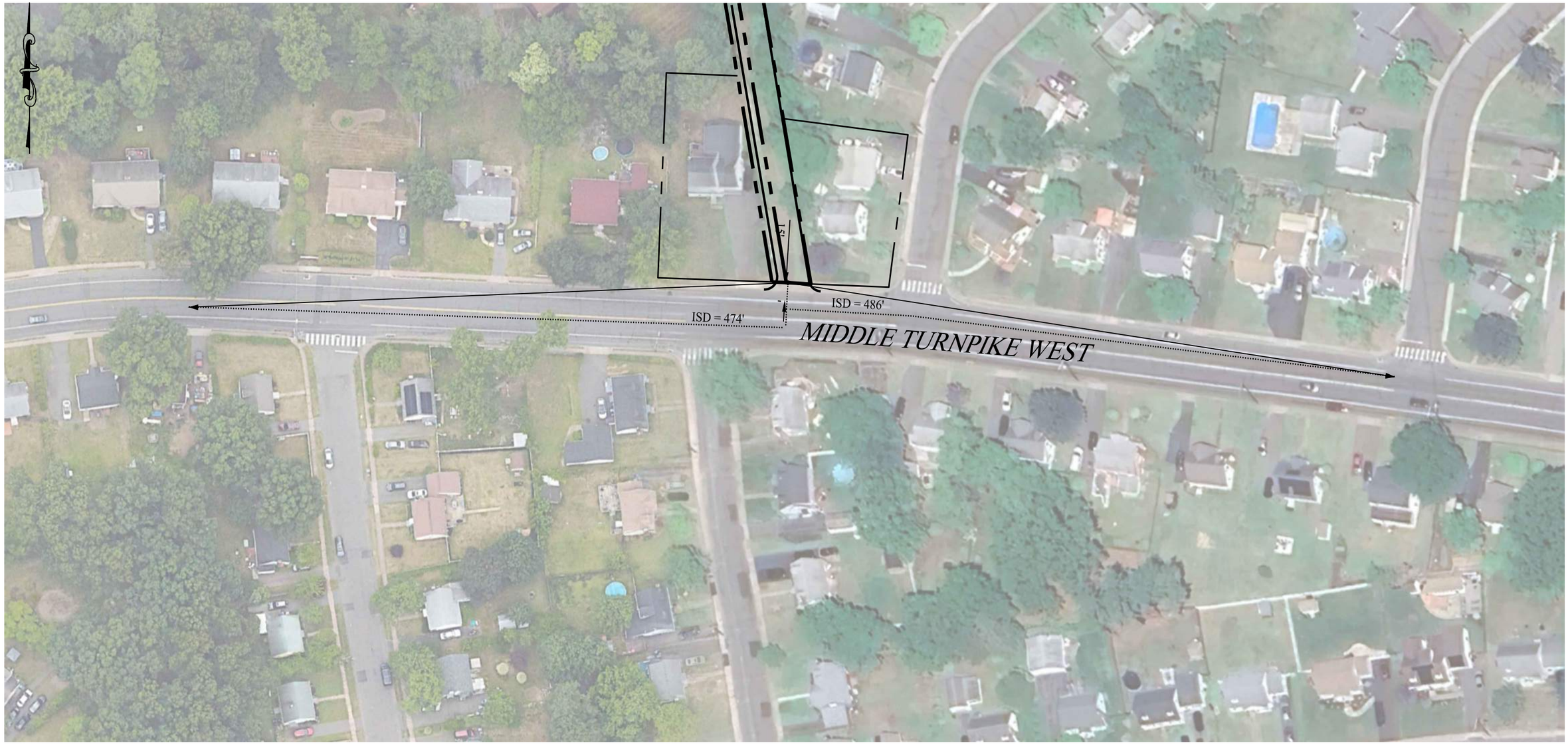
2026 BUILD TRAFFIC VOLUMES

708 HILLIARD STREET
MANCHESTER, CONNECTICUT

Project #:	24116201
Plan Date:	11/01/24
Scale:	NTS
Figure:	6



NOTES:

1. INTERSECTION SIGHT DISTANCE IS MEASURED 15 FEET FROM THE SHOULDER.
2. INTERSECTION SIGHT DISTANCE IS BASED ON AN 85TH PERCENTILE SPEED OF 43 MILES PER HOUR EASTBOUND AND 44 MILES PER HOUR WESTBOUND ALONG MIDDLE TURNPIKE WEST INTERSECTION SIGHT DISTANCES BASED ON GUIDANCE PROVIDED IN THE 2023 EDITION OF THE CONNECTICUT HIGHWAY DESIGN MANUAL.

80 0 40 80

Rev. #	Date	Description

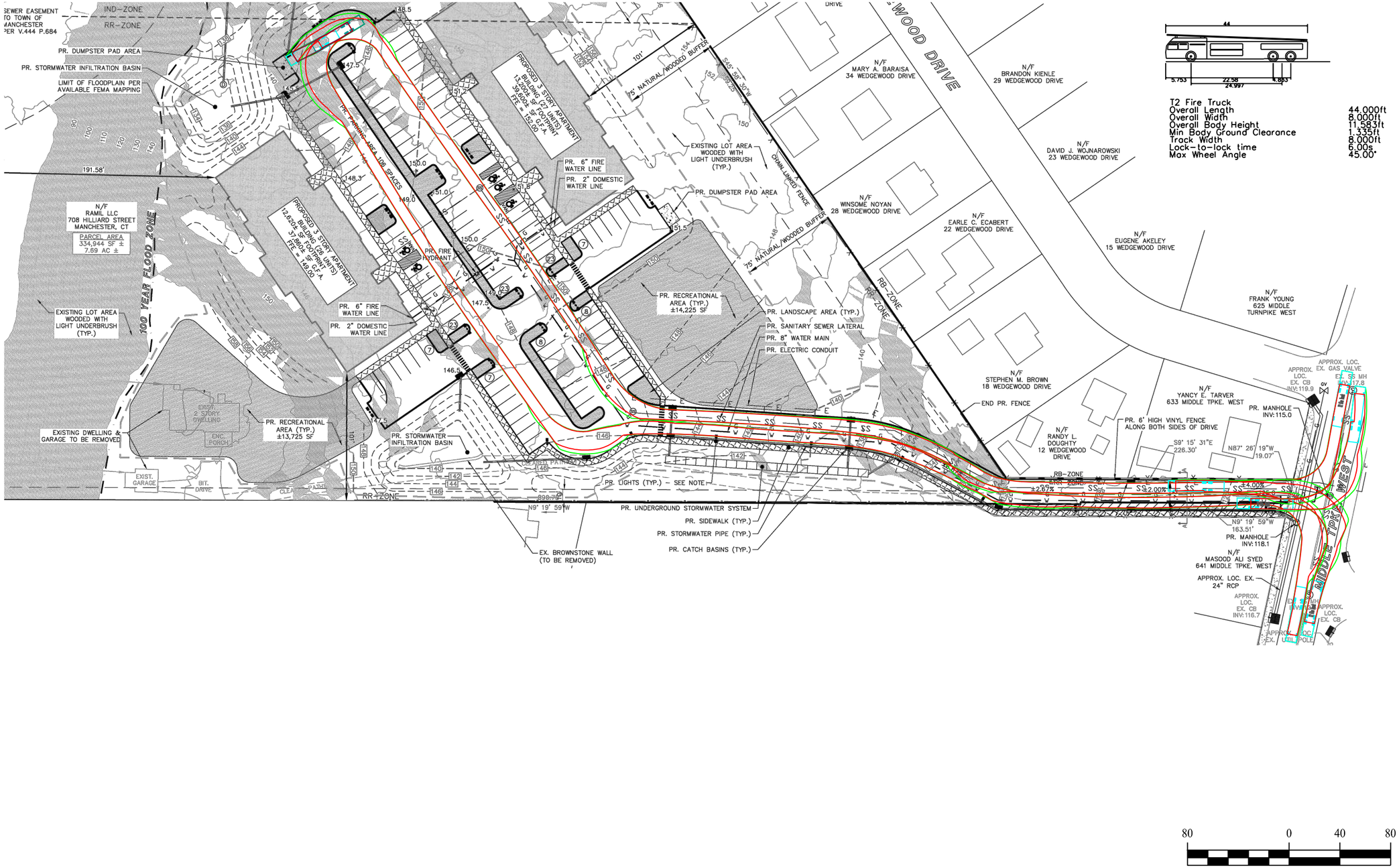
SOLLI ENGINEERING
501 Main Street, Monroe, CT 06468
T: (203) 880-5455 | F: (203) 880-9695

Drawn By:	CJS
Checked By:	MB
Project #:	24116201
Plan Date:	11/01/24
Scale:	1" = 80'

Project:
PROPOSED REDEVELOPMENT
708 HILLIARD STREET
MANCHESTER, CONNECTICUT

Sheet Title:
INTERSECTION SIGHT DISTANCE

SHEET #:
ISD-1



Rev. #:	Date	Description
1	12/23/24	Revised Per Preliminary Plan

SOLLI ENGINEERING
501 Main Street, Monroe, CT 06468
T: (203) 880-5455 | F: (203) 880-9695

Drawn By:	CJS
Checked By:	MB
Project #:	24116201
Plan Date:	11/04/24
Scale:	1" = 80'

Project:

PROPOSED REDEVELOPMENT

708 HILLIARD STREET
MANCHESTER, CONNECTICUT

Sheet Title:

TRUCK TURNING

SHEET #:

TT-1

Peak Hour Trip Generation Summary
708 Hilliard Street - Manchester, Connecticut

			AM Peak Hour			PM Peak Hour			SAT Peak Hour		
	Variable	LUC	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
Proposed Redevelopment											
Multifamily Housing (Low-Rise)	53	221	5	16	21	14	7	21	11	11	22
Total Trips			**5**	**16**	**21**	**14**	**7**	**21**	**11**	**11**	**22**

Source: ITE Trip Generation, 11th Edition

Land Use	Time Period	Average Rate	Entering	Exiting
LUC 220 - Multifamily Housing (Low-Rise)	AM	0.40	24%	76%
	PM	0.39	63%	37%
	SAT	0.41	50%	50%

Land Use: 220
Multifamily Housing (Low-Rise)

Description

Low-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have two or three floors (levels). Various configurations fit this description, including walkup apartment, mansion apartment, and stacked townhouse.

- A walkup apartment typically is two or three floors in height with dwelling units that are accessed by a single or multiple entrances with stairways and hallways.
- A mansion apartment is a single structure that contains several apartments within what appears to be a single-family dwelling unit.
- A fourplex is a single two-story structure with two matching dwelling units on the ground and second floors. Access to the individual units is typically internal to the structure and provided through a central entry and stairway.
- A stacked townhouse is designed to match the external appearance of a townhouse. But, unlike a townhouse dwelling unit that only shares walls with an adjoining unit, the stacked townhouse units share both floors and walls. Access to the individual units is typically internal to the structure and provided through a central entry and stairway.

Multifamily housing (mid-rise) (Land Use 221), multifamily housing (high-rise) (Land Use 222), affordable housing (Land Use 223), and off-campus student apartment (low-rise) (Land Use 225) are related land uses.

Land Use Subcategory

Data are presented for two subcategories for this land use: (1) not close to rail transit and (2) close to rail transit. A site is considered close to rail transit if the walking distance between the residential site entrance and the closest rail transit station entrance is ½ mile or less.

Additional Data

For the three sites for which both the number of residents and the number of occupied dwelling units were available, there were an average of 2.72 residents per occupied dwelling unit.

For the two sites for which the numbers of both total dwelling units and occupied dwelling units were available, an average of 96.2 percent of the total dwelling units were occupied.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip

generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

For the three sites for which data were provided for both occupied dwelling units and residents, there was an average of 2.72 residents per occupied dwelling unit.

It is expected that the number of bedrooms and number of residents are likely correlated to the trips generated by a residential site. To assist in future analysis, trip generation studies of all multifamily housing should attempt to obtain information on occupancy rate and on the mix of residential unit sizes (i.e., number of units by number of bedrooms at the site complex).

The sites were surveyed in the 1980s, the 1990s, the 2000s, the 2010s, and the 2020s in British Columbia (CAN), California, Delaware, Florida, Georgia, Illinois, Indiana, Maine, Maryland, Massachusetts, Minnesota, New Jersey, Ontario (CAN), Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Utah, and Washington.

Source Numbers

188, 204, 237, 300, 305, 306, 320, 321, 357, 390, 412, 525, 530, 579, 583, 638, 864, 866, 896, 901, 903, 904, 936, 939, 944, 946, 947, 948, 963, 964, 966, 967, 1012, 1013, 1014, 1036, 1047, 1056, 1071, 1076

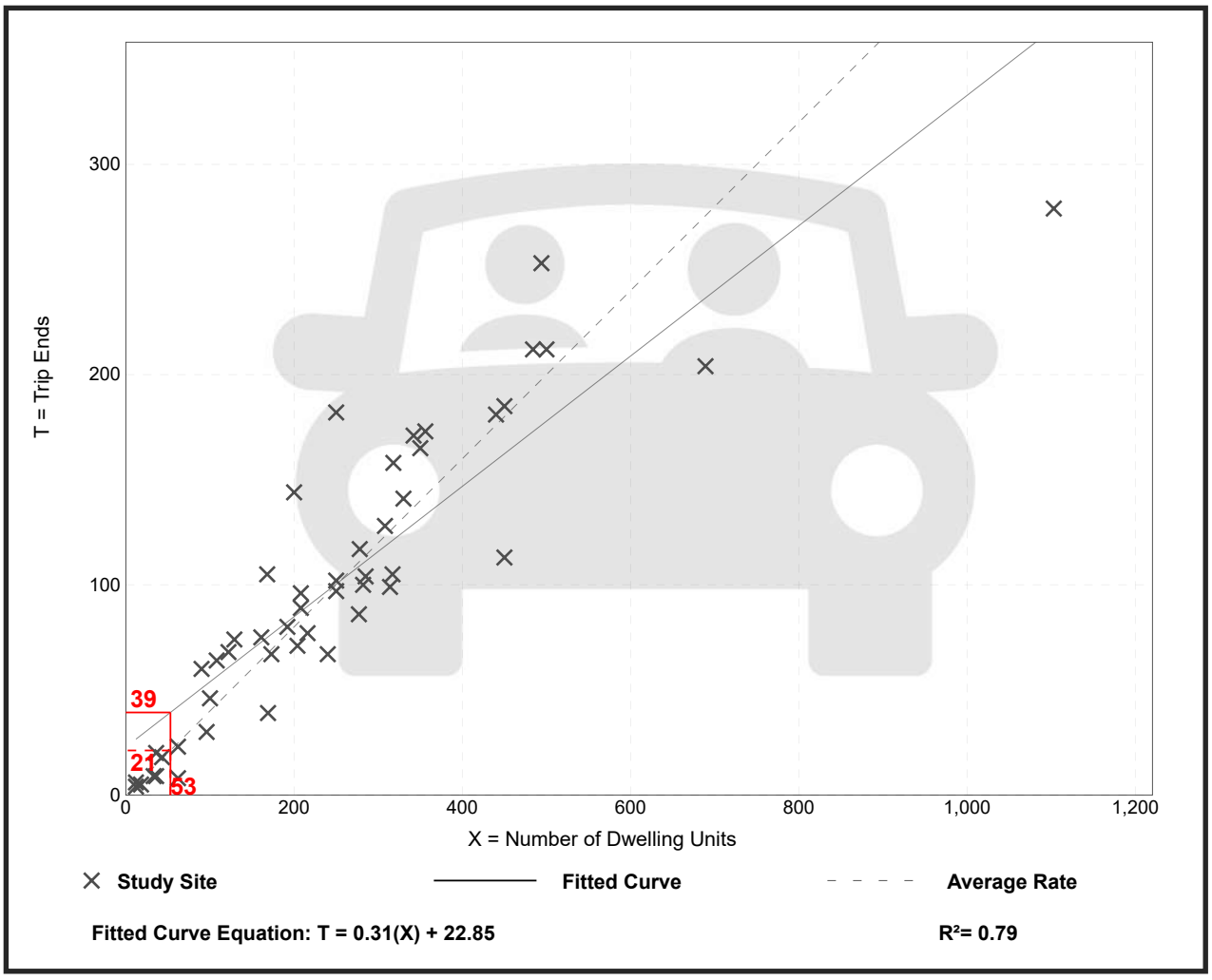
Multifamily Housing (Low-Rise)
Not Close to Rail Transit (220)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 49
Avg. Num. of Dwelling Units: 249
Directional Distribution: 24% entering, 76% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.40	0.13 - 0.73	0.12

Data Plot and Equation



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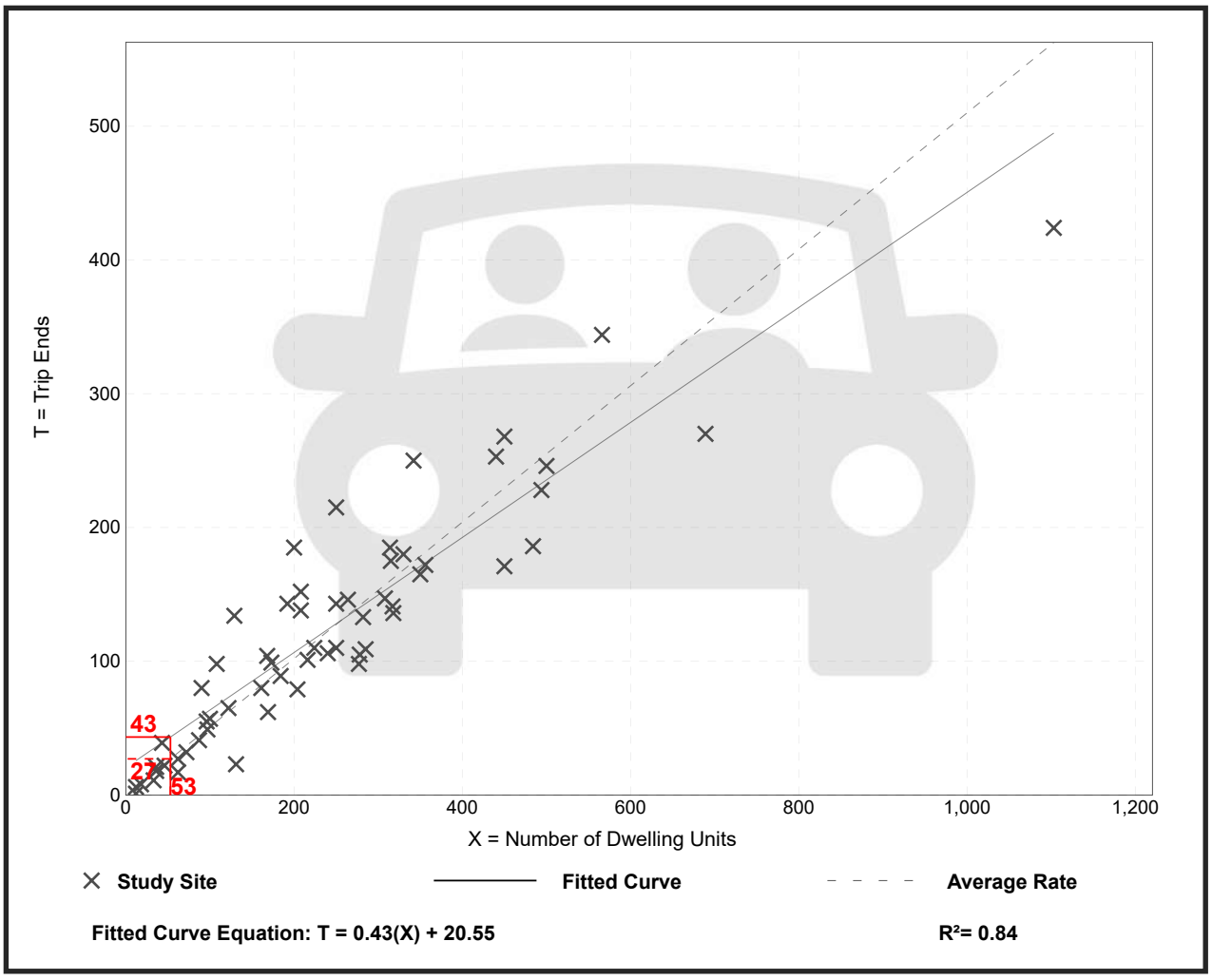
Multifamily Housing (Low-Rise)
Not Close to Rail Transit (220)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 59
Avg. Num. of Dwelling Units: 241
Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.51	0.08 - 1.04	0.15

Data Plot and Equation



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Multifamily Housing (Low-Rise)
Not Close to Rail Transit (220)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Saturday, Peak Hour of Generator**

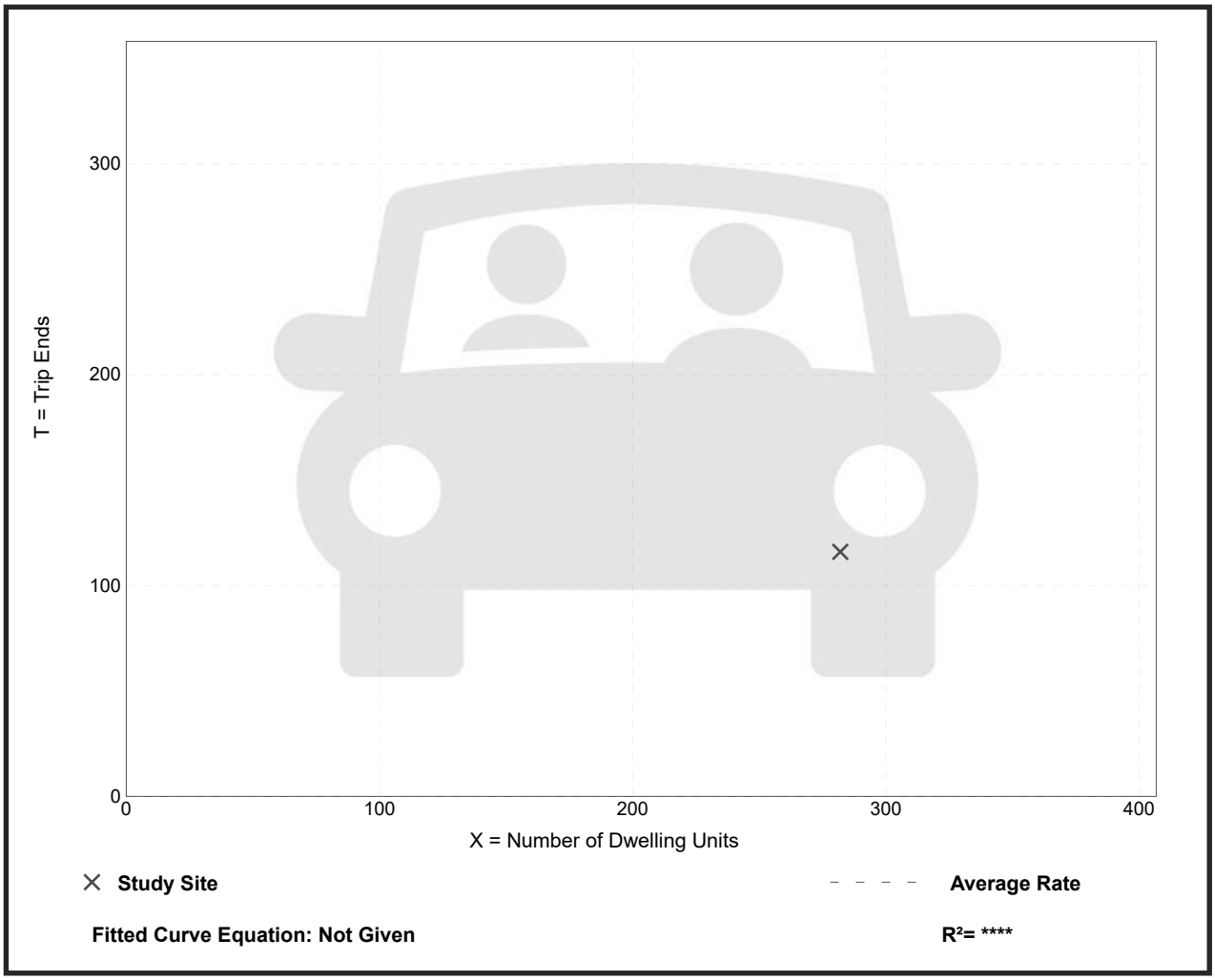
Setting/Location: **General Urban/Suburban**
Number of Studies: 1
Avg. Num. of Dwelling Units: 282
Directional Distribution: Not Available

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.41	0.41 - 0.41	*

Data Plot and Equation

Caution – Small Sample Size



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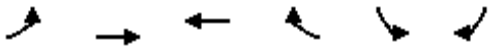


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	3	398	409	2	6	10
Future Volume (vph)	3	398	409	2	6	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.999		0.917	
Flt Protected					0.981	
Satd. Flow (prot)	0	1863	1879	0	1709	0
Flt Permitted					0.981	
Satd. Flow (perm)	0	1863	1879	0	1709	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		264	161		244	
Travel Time (s)		6.0	3.7		5.5	
Peak Hour Factor	0.83	0.83	0.95	0.95	0.92	0.92
Heavy Vehicles (%)	0%	2%	1%	0%	0%	0%
Adj. Flow (vph)	4	480	431	2	7	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	484	433	0	18	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 33.3%		ICU Level of Service A	
Analysis Period (min) 15			

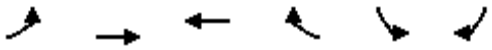
Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	398	409	2	6	10
Future Vol, veh/h	3	398	409	2	6	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	83	83	95	95	92	92
Heavy Vehicles, %	0	2	1	0	0	0
Mvmt Flow	4	480	431	2	7	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	433	0	-	0	920	432
Stage 1	-	-	-	-	432	-
Stage 2	-	-	-	-	488	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1137	-	-	-	303	628
Stage 1	-	-	-	-	659	-
Stage 2	-	-	-	-	621	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1137	-	-	-	301	628
Mov Cap-2 Maneuver	-	-	-	-	301	-
Stage 1	-	-	-	-	656	-
Stage 2	-	-	-	-	621	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	13.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1137	-	-	-	446
HCM Lane V/C Ratio	0.003	-	-	-	0.039
HCM Control Delay (s)	8.2	0	-	-	13.4
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	9	422	361	5	2	5
Future Volume (vph)	9	422	361	5	2	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.998		0.904	
Flt Protected		0.999			0.986	
Satd. Flow (prot)	0	1862	1896	0	1694	0
Flt Permitted		0.999			0.986	
Satd. Flow (perm)	0	1862	1896	0	1694	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		264	161		244	
Travel Time (s)		6.0	3.7		5.5	
Peak Hour Factor	0.92	0.92	0.81	0.81	0.92	0.92
Heavy Vehicles (%)	0%	2%	0%	1%	0%	0%
Adj. Flow (vph)	10	459	446	6	2	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	469	452	0	7	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.4%		ICU Level of Service A	
Analysis Period (min) 15			

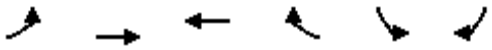
Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	9	422	361	5	2	5
Future Vol, veh/h	9	422	361	5	2	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	81	81	92	92
Heavy Vehicles, %	0	2	0	1	0	0
Mvmt Flow	10	459	446	6	2	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	452	0	-	0	928	449
Stage 1	-	-	-	-	449	-
Stage 2	-	-	-	-	479	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1119	-	-	-	300	614
Stage 1	-	-	-	-	647	-
Stage 2	-	-	-	-	627	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1119	-	-	-	296	614
Mov Cap-2 Maneuver	-	-	-	-	296	-
Stage 1	-	-	-	-	639	-
Stage 2	-	-	-	-	627	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	12.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1119	-	-	-	470
HCM Lane V/C Ratio	0.009	-	-	-	0.016
HCM Control Delay (s)	8.2	0	-	-	12.8
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	7	261	288	4	4	7
Future Volume (vph)	7	261	288	4	4	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.998		0.910	
Flt Protected		0.999			0.984	
Satd. Flow (prot)	0	1880	1878	0	1701	0
Flt Permitted		0.999			0.984	
Satd. Flow (perm)	0	1880	1878	0	1701	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		264	161		244	
Travel Time (s)		6.0	3.7		5.5	
Peak Hour Factor	0.89	0.89	0.86	0.86	0.92	0.92
Heavy Vehicles (%)	0%	1%	1%	0%	0%	0%
Adj. Flow (vph)	8	293	335	5	4	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	301	340	0	12	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 29.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	7	261	288	4	4	7
Future Vol, veh/h	7	261	288	4	4	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	86	86	92	92
Heavy Vehicles, %	0	1	1	0	0	0
Mvmt Flow	8	293	335	5	4	8

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	340	0	-	0	647	338
Stage 1	-	-	-	-	338	-
Stage 2	-	-	-	-	309	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1230	-	-	-	439	709
Stage 1	-	-	-	-	727	-
Stage 2	-	-	-	-	749	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1230	-	-	-	435	709
Mov Cap-2 Maneuver	-	-	-	-	435	-
Stage 1	-	-	-	-	721	-
Stage 2	-	-	-	-	749	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	11.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1230	-	-	-	577
HCM Lane V/C Ratio	0.006	-	-	-	0.021
HCM Control Delay (s)	7.9	0	-	-	11.4
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

STUDY AREA CRASH SUMMARY - OCTOBER 2021 THROUGH OCTOBER 2024
PROPOSED DEVELOPMENT - 708 HILLIARD STREET, MANCHESTER, CONNECTICUT

ACCIDENT TYPE AND SEVERITY	Middle Turnpike West Across Site Frontage	**TOTAL**
Accident Type:		
Angle	3	3
Other	1	1
Accident Severity:		
Fatality	0	0
Injury Any Type	1	1
Property Damage Only	3	3
Road Surface Condition:		
Dry	3	3
Wet	1	1
TOTAL NUMBER OF ACCIDENTS	**4**	**4**

Prepared by National Data & Surveying Services

SPEED

Middle Turnpike W W/O Wedgewood Dr

Day: Saturday
Date: 10/26/2024

City: Manchester
Project #: CT24_410073_001

HOURLY BREAKDOWN

Time	EASTBOUND														WESTBOUND														TOTALS												
	5	15	20	25	30	35	40	45	50	55	60	65	70	Total	5	15	20	25	30	35	40	45	50	55	60	65	70	Total	5	15	20	25	30	35	40	45	50	55	60	65	70	Total
	15	20	25	30	35	40	45	50	55	60	65	70	99		15	20	25	30	35	40	45	50	55	60	65	70	99		15	20	25	30	35	40	45	50	55	60	65	70	99	
0:00	0	0	0	6	3	22	14	6	0	0	0	0	0	51	0	0	0	3	9	29	14	5	5	0	0	0	0	65	0	0	0	9	12	51	28	11	5	0	0	0	0	116
1:00	0	0	0	0	4	10	14	2	2	0	0	0	0	32	0	0	0	3	7	11	13	5	2	0	0	0	0	41	0	0	0	3	11	21	27	7	4	0	0	0	0	73
2:00	0	0	0	0	4	7	9	5	2	1	0	0	0	28	1	0	1	0	3	10	4	1	2	0	0	0	0	22	1	0	1	0	7	17	13	6	4	1	0	0	0	50
3:00	0	0	1	0	3	5	5	3	0	0	0	0	0	17	0	0	1	1	2	5	5	1	1	1	0	0	0	17	0	0	2	1	5	10	10	4	1	1	0	0	0	34
4:00	0	0	0	1	4	3	4	4	0	0	0	0	0	16	0	0	2	2	4	5	5	1	3	0	0	0	0	22	0	0	2	3	8	8	9	5	3	0	0	0	0	38
5:00	0	0	1	4	2	12	8	3	1	0	0	0	0	31	0	1	1	1	7	15	7	4	1	0	0	0	0	37	0	1	2	5	9	27	15	7	2	0	0	0	0	68
6:00	0	0	2	4	4	16	17	5	4	2	0	0	0	54	0	0	2	1	10	13	17	7	3	1	0	0	0	54	0	0	4	5	14	29	34	12	7	3	0	0	0	108
7:00	0	0	1	3	16	37	27	9	1	1	0	0	0	95	1	0	3	3	14	40	35	14	7	2	0	0	0	119	1	0	4	6	30	77	62	23	8	3	0	0	0	214
8:00	0	0	5	12	23	51	44	7	0	1	0	0	0	143	0	0	0	9	22	46	28	17	17	4	0	0	0	143	0	0	5	21	45	97	72	24	17	5	0	0	0	286
9:00	0	0	3	11	30	73	54	9	3	0	0	0	0	183	1	1	1	10	32	75	49	12	8	1	0	0	0	190	1	1	4	21	62	148	103	21	11	1	0	0	0	373
10:00	0	2	3	24	46	88	61	12	3	0	0	0	0	239	0	1	2	18	28	76	59	14	3	2	0	0	0	203	0	3	5	42	74	164	120	26	6	2	0	0	0	442
11:00	0	0	7	21	41	122	64	9	3	1	0	0	0	268	0	1	4	12	41	108	43	12	2	0	0	0	0	223	0	1	11	33	82	230	107	21	5	1	0	0	0	491
12:00	0	1	2	33	71	87	51	5	3	3	0	0	0	256	0	1	3	18	47	127	59	16	7	4	0	0	0	282	0	2	5	51	118	214	110	21	10	7	0	0	0	538
13:00	1	0	8	16	53	117	45	12	1	0	0	0	0	253	2	0	2	20	47	98	64	16	7	0	0	0	0	256	3	0	10	36	100	215	109	28	8	0	0	0	0	509
14:00	0	0	4	17	46	114	58	9	3	0	0	0	0	251	0	0	7	14	42	84	63	12	7	1	0	0	0	230	0	0	11	31	88	198	121	21	10	1	0	0	0	481
15:00	0	1	8	22	54	108	74	12	1	1	0	0	0	281	1	1	3	20	34	98	66	15	5	2	0	0	0	245	1	2	11	42	88	206	140	27	6	3	0	0	0	526
16:00	0	0	3	21	69	92	48	11	1	0	0	0	0	245	0	2	4	17	50	98	56	16	3	1	0	0	0	247	0	2	7	38	119	190	104	27	4	1	0	0	0	492
17:00	0	0	2	17	59	94	56	9	4	2	0	0	0	243	0	0	2	11	29	97	58	12	4	0	0	0	0	213	0	0	4	28	88	191	114	21	8	2	0	0	0	456
18:00	0	0	5	26	45	77	50	12	7	0	0	0	0	222	1	1	5	13	47	90	38	8	5	2	0	0	0	210	1	1	10	39	92	167	88	20	12	2	0	0	0	432
19:00	1	0	0	10	28	86	44	11	1	0	0	0	0	181	1	0	1	13	48	90	43	7	3	1	0	0	0	207	2	0	1	23	76	176	87	18	4	1	0	0	0	388
20:00	0	2	0	13	33	76	41	5	0	1	0	0	0	171	0	0	2	9	34	55	30	6	3	2	0	0	0	141	0	2	2	22	67	131	71	11	3	3	0	0	0	312
21:00	0	0	2	11	34	45	25	10	2	0	0	0	0	129	0	0	1	9	22	47	15	6	3	0	0	0	0	103	0	0	3	20	56	92	40	16	5	0	0	0	0	232
22:00	0	0	0	8	28	35	26	8	5	1	0	0	0	111	0	0	0	8	22	29	23	7	4	0	0	0	0	93	0	0	0	16	50	64	49	15	9	1	0	0	0	204
23:00	0	0	0	8	17	34	27	11	6	1	0	0	0	104	0	0	0	3	8	20	19	6	2	0	0	0	0	58	0	0	0	11	25	54	46	17	8	1	0	0	0	162
Totals	**2**	**6**	**57**	**288**	**717**	**1,411**	**866**	**189**	**53**	**15**	**0**	**0**	**0**	**3,604**	**8**	**9**	**47**	**218**	**609**	**1,366**	**813**	**220**	**107**	**24**	**0**	**0**	**0**	**3,421**	**10**	**15**	**104**	**506**	**1,326**	**2,777**	**1,679**	**409**	**160**	**39**	**0**	**0**	**0**	**7,025**
% of Totals	0%	0%	2%	8%	20%	39%	24%	5%	1%	0%				100%	0%	0%	1%	6%	18%	40%	24%	6%	3%	1%				100%	0%	0%	1%	7%	19%	40%	24%	6%	2%	1%				100%

STATISTICS

00:00 - 12:00	0	2	23	86	180	446	321	74	19	6	0	0	0	1157	3	4	17	63	179	433	279	93	54	11	0	0	0	1136	3	6	40	149	359	879	600	167	73	17	0	0	0	2293
%	0%	0%	1%	2%	5%	12%	9%	2%	1%	0%	0%	0%	0%	32%	0%	0%	0%	2%	5%	12%	8%	3%	1%	0%	0%	0%	0%	32%	0%	0%	1%	4%	10%	24%	17%	5%	2%	0%	0%	0%	0%	64%
Peak Hour	0:00	10:00	10:45	11:45	11:45	11:00	9:45	9:15	10:30	5:30	0:00	0:00	0:00	11:15	1:30	10:30	11:00	10:00	11:30	11:30	9:45	7:45	8:30	8:00	0:00	0:00	0:00	11:45	1:30	10:00	10:45	11:45	11:45	11:30	9:45	7:30	8:30	11:45	0:00	0:00	0:00	11:45
Peak Volume	0	2	8	31	69	122	70	12	5	2	0	0	0	274	1	2	4	18	45	131	66	19	18	4	0	0	0	266	1	3	11	49	112	233	136	26	18	6	0	0	0	532
12:00 - 24:00	2	4	34	202	537	965	545	115	34	9	0	0	0	2447	5	5	30	155	430	933	534	127	53	13	0	0	0	2285	7	9	64	357	967	1898	1079	242	87	22	0	0	0	4732
%	0%	0%	1%	6%	15%	27%	15%	3%	1%	0%	0%	0%	0%	68%	0%	0%	1%	4%	12%	26%	15%	4%	1%	0%	0%	0%	0%	63%	0%	0%	2%	10%	27%	53%	30%	7%	2%	1%	0%	0%	0%	131%
Peak Hour	12:30	19:15	13:15	12:00	12:00	14:15	14:45	13:15	18:00	12:00	12:00	12:00	12:00	14:45	12:30	15:30	13:45	14:45	18:15	12:00	14:45	12:30	13:45	12:00	12:00	12:00	12:00	12:00	12:30	12:00	13:15	12:00	12:30	14:15	14:45	15:15	17:45	12:00	12:00	12:00	12:00	14:45
Peak Volume	1	2	10	33	71	129	76	15	7	3	0	0	0	290	2	2	7	21	57	127	73	19	9	4	0	0	0	282	3	2	14	51	121	220	149	33	13	7	0	0	0	539
07:00 - 09:00	0	0	6	15	39	88	71	16	1	2	0	0	0	238	1	0	3	12	36	86	63	31	24	6	0	0	0	262	1	0	9	27	75	174	134	47	25	8	0	0	0	500
%	0%	0%	0%	0%	1%	2%	2%	0%	0%	0%	0%	0%	0%	7%	0%	0%	0%	0%	1%	2%	2%	1%	1%	0%	0%	0%	0%	7%	0%	0%	0%	1%	2%	5%	4%	1%	1%	0%	0%	0%	0%	14%
Peak Hour	7:00	7:00	8:00	8:00	7:45	8:00	8:00	7:30	7:00	7:00	7:00	7:00	7:00	8:00	7:00	7:00	7:00	8:00	8:00	7:30	7:00	7:45	8:00	8:00	7:00	7:00	7:00	8:00	7:00	7:00	7:15	8:00	7:45	8:00	8:00	7:30	8:00	8:00	7:00	7:00	7:00	8:00
Peak Volume	0	0	5	12	28	51	44	10	1	1	0	0	0	143	1	0	3	9	22	47	35	19	17	4	0	0	0	143	1	0	6	21	49	97	72	26	17	5	0	0	0	286
16:00 - 18:00	0	0	5	38	128	186	104	20	5	2	0	0	0	488	0	2	6	28	79	195	114	28	7	1	0	0	0	460	0	2	11	66	207	381	218	48	12	3	0	0	0	948
%	0%	0%	0%	1%	4%	5%	3%	1%	0%	0%	0%	0%	0%	14%	0%	0%	0%	1%	2%	5%	3%	1%	0%	0%	0%	0%	0%	13%	0%	0%	0%	2%	6%	11%	6%	1%	0%	0%	0%	0%	0%	26%
Peak Hour	16:00	16:00	16:00	16:45	16:00	16:15	16:45	16:00	17:00	16:30	16:00	16:00	16:00	16:00	16:00	16:00	16:00	16:00	16:00	16:00	16:15	16:00	16:30	16:00	16:00	16:00	16:00	16:00	16:00	16:00	16:00	16:00	16:00	17:00	16:45	16:00	16:30	16:30	16:00	16:00	16:00	16:00
Peak Volume	0	0	3	25	69	94	60	11	4	2	0	0	0	245	0	2	4	17	50	98	60	16	5	1	0	0	0	247	0	2	7	38	119	191	116	27	8	3	0	0	0	492

Direction	Percentiles					
	15th	50th	Average	85th	95th	ADT
EASTBOUND	31	38	37	43	47	3604
WESTBOUND	32	38	38	44	49	3421
TOTALS	32	38	38	44	48	7025

Prepared by National Data & Surveying Services

SPEED

Middle Turnpike W W/O Wedgewood Dr

Day: Thursday
Date: 10/24/2024

City: Manchester
Project #: CT24_410073_001

HOURLY BREAKDOWN

Time	EASTBOUND													Total	WESTBOUND													Total	TOTALS													Total
	5	15	20	25	30	35	40	45	50	55	60	65	70		5	15	20	25	30	35	40	45	50	55	60	65	70		5	15	20	25	30	35	40	45	50	55	60	65	70	
	15	20	25	30	35	40	45	50	55	60	65	70	99		15	20	25	30	35	40	45	50	55	60	65	70	99		15	20	25	30	35	40	45	50	55	60	65	70	99	
0:00	0	0	0	0	3	14	11	2	1	0	0	0	0	31	0	1	2	2	5	13	3	2	3	0	0	0	0	31	0	1	2	2	8	27	14	4	4	0	0	0	0	62
1:00	0	0	0	3	2	8	5	1	0	0	0	0	0	19	0	0	0	2	5	3	2	0	0	0	0	0	0	12	0	0	0	5	7	11	7	1	0	0	0	0	0	31
2:00	0	0	0	3	1	6	4	1	1	0	0	0	0	16	0	0	0	1	1	4	1	0	0	0	0	0	0	7	0	0	0	4	2	10	5	1	1	0	0	0	0	23
3:00	0	0	0	1	2	7	3	1	0	0	0	0	0	14	0	0	0	1	3	6	6	1	2	0	0	0	0	19	0	0	0	2	5	13	9	2	2	0	0	0	0	33
4:00	0	0	1	0	0	12	6	5	1	2	0	0	0	27	0	0	0	1	7	8	11	5	0	0	0	0	0	32	0	0	1	1	7	20	17	10	1	2	0	0	0	59
5:00	0	0	2	3	8	20	16	7	4	1	0	0	0	61	0	1	2	4	14	12	25	7	5	1	0	0	0	71	0	1	4	7	22	32	41	14	9	2	0	0	0	132
6:00	0	0	8	9	29	50	36	8	0	0	0	0	0	140	0	0	2	8	34	62	32	12	4	2	0	0	0	156	0	0	10	17	63	112	68	20	4	2	0	0	0	296
7:00	0	3	5	35	126	172	70	8	2	0	0	0	0	421	0	0	3	23	87	138	86	19	7	1	0	0	0	364	0	3	8	58	213	310	156	27	9	1	0	0	0	785
8:00	0	0	2	6	46	126	61	20	1	0	0	0	0	262	0	0	6	10	68	111	78	17	6	0	0	0	0	296	0	0	8	16	114	237	139	37	7	0	0	0	0	558
9:00	3	0	0	23	67	97	35	12	1	0	0	0	0	238	1	0	5	9	40	114	45	9	7	0	0	0	0	230	4	0	5	32	107	211	80	21	8	0	0	0	0	468
10:00	2	0	8	20	71	90	48	8	0	0	0	0	0	247	1	2	3	8	66	78	53	10	6	1	0	0	0	228	3	2	11	28	137	168	101	18	6	1	0	0	0	475
11:00	0	2	4	17	56	108	33	5	3	0	0	0	0	228	0	2	4	8	53	96	60	13	2	0	0	0	0	238	0	4	8	25	109	204	93	18	5	0	0	0	0	466
12:00	0	0	2	14	59	124	43	14	6	0	0	0	0	262	0	0	2	12	55	92	63	17	3	2	0	0	0	246	0	0	4	26	114	216	106	31	9	2	0	0	0	508
13:00	0	0	4	21	50	127	50	10	3	0	0	0	0	265	0	1	0	8	54	90	69	17	3	0	0	0	0	242	0	1	4	29	104	217	119	27	6	0	0	0	0	507
14:00	1	1	5	49	108	158	56	10	1	0	0	0	0	389	0	1	2	14	71	139	87	17	6	0	0	0	0	337	1	2	7	63	179	297	143	27	7	0	0	0	0	726
15:00	1	2	2	17	109	176	73	16	3	0	0	0	0	399	1	2	3	20	73	135	71	17	3	0	0	0	0	325	2	4	5	37	182	311	144	33	6	0	0	0	0	724
16:00	0	0	3	36	99	145	58	18	2	2	0	0	0	363	0	0	2	8	63	145	85	20	4	1	0	0	0	328	0	0	5	44	162	290	143	38	6	3	0	0	0	691
17:00	0	1	4	25	117	165	51	13	1	1	0	0	0	378	1	1	2	7	66	106	85	17	2	0	0	0	0	287	1	2	6	32	183	271	136	30	3	1	0	0	0	665
18:00	0	0	4	24	98	132	44	9	1	0	0	0	0	312	0	0	1	17	71	95	43	10	0	0	0	0	0	237	0	0	5	41	169	227	87	19	1	0	0	0	0	549
19:00	0	0	3	8	59	109	45	5	1	0	0	0	0	230	0	0	3	7	56	78	32	9	1	4	0	0	0	190	0	0	6	15	115	187	77	14	2	4	0	0	0	420
20:00	0	0	3	6	33	63	42	5	0	0	0	0	0	152	0	1	2	9	40	50	29	8	1	1	0	0	0	141	0	1	5	15	73	113	71	13	1	1	0	0	0	293
21:00	0	0	1	4	26	45	22	17	2	0	0	0	0	117	0	0	1	5	29	67	33	5	3	1	0	0	0	144	0	0	2	9	55	112	55	22	5	1	0	0	0	261
22:00	0	1	2	6	16	26	18	6	5	0	0	0	0	80	0	1	1	1	24	18	29	8	4	0	0	0	0	86	0	2	3	7	40	44	47	14	9	0	0	0	0	166
23:00	0	0	1	1	11	30	19	6	3	0	0	0	0	71	0	0	0	2	12	16	20	9	2	0	0	0	0	61	0	0	1	3	23	46	39	15	5	0	0	0	0	132
Totals	**7**	**10**	**64**	**331**	**1,196**	**2,010**	**849**	**207**	**42**	**6**	**0**	**0**	**0**	**4,722**	**4**	**13**	**46**	**187**	**997**	**1,676**	**1,048**	**249**	**74**	**14**	**0**	**0**	**0**	**4,308**	**11**	**23**	**110**	**518**	**2,193**	**3,686**	**1,897**	**456**	**116**	**20**	**0**	**0**	**0**	**9,030**
% of Totals	0%	0%	1%	7%	25%	43%	18%	4%	1%	0%				100%	0%	0%	1%	4%	23%	39%	24%	6%	2%	0%				100%	0%	0%	1%	6%	24%	41%	21%	5%	1%	0%				100%

STATISTICS

00:00 - 12:00	5	5	30	120	411	710	328	78	14	3	0	0	0	1704	2	6	27	77	383	645	402	95	42	5	0	0	0	1684	7	11	57	197	794	1355	730	173	56	8	0	0	0	3388
%	0%	0%	1%	3%	9%	15%	7%	2%	0%	0%	0%	0%	0%	36%	0%	0%	1%	2%	8%	14%	9%	2%	1%	0%	0%	0%	0%	36%	0%	0%	1%	4%	17%	29%	15%	4%	1%	0%	0%	0%	0%	72%
Peak Hour	8:15	7:00	6:30	7:00	7:00	7:00	6:45	8:00	11:45	4:00	0:00	0:00	0:00	7:00	8:15	10:15	8:15	7:15	7:15	7:15	7:15	6:45	7:15	6:00	0:00	0:00	0:00	7:15	8:15	10:15	10:30	7:00	7:00	7:15	7:15	8:00	7:15	4:00	0:00	0:00	0:00	7:15
Peak Volume	3	3	9	35	126	172	75	20	5	2	0	0	0	421	1	3	8	24	95	157	93	22	10	2	0	0	0	401	4	4	14	58	213	320	162	37	12	2	0	0	0	791
12:00 - 24:00	2	5	34	211	785	1300	521	129	28	3	0	0	0	3018	2	7	19	110	614	1031	646	154	32	9	0	0	0	2624	4	12	53	321	1399	2331	1167	283	60	12	0	0	0	5642
%	0%	0%	1%	4%	17%	28%	11%	3%	1%	0%	0%	0%	0%	64%	0%	0%	0%	2%	13%	22%	14%	3%	1%	0%	0%	0%	0%	56%	0%	0%	1%	7%	30%	49%	25%	6%	1%	0%	0%	0%	0%	119%
Peak Hour	14:15	14:15	12:30	14:00	14:45	15:15	15:00	16:00	12:00	15:45	12:00	12:00	12:00	15:15	14:45	14:45	14:45	15:00	14:15	15:45	16:30	16:15	14:00	19:00	12:00	12:00	12:00	15:15	14:15	14:45	16:45	13:30	14:45	15:15	16:30	16:00	12:00	19:00	12:00	12:00	12:00	15:15
Peak Volume	2	2	5	49	123	179	73	18	6	2	0	0	0	414	1	2	4	20	77	154	93	22	6	4	0	0	0	354	2	4	8	64	195	332	156	38	9	4	0	0	0	768
07:00 - 09:00	0	3	7	41	172	298	131	28	3	0	0	0	0	683	0	0	9	33	155	249	164	36	13	1	0	0	0	660	0	3	16	74	327	547	295	64	16	1	0	0	0	1343
%	0%	0%	0%	1%	4%	6%	3%	1%	0%	0%	0%	0%	0%	14%	0%	0%	0%	1%	3%	5%	3%	1%	0%	0%	0%	0%	0%	14%	0%	0%	0%	2%	7%	12%	6%	1%	0%	0%	0%	0%	0%	28%
Peak Hour	7:00	7:00	7:00	7:00	7:00	7:00	7:00	8:00	7:00	7:00	7:00	7:00	7:00	7:00	7:00	7:00	7:30	7:15	7:15	7:15	7:15	7:00	7:15	7:00	7:00	7:00	7:00	7:15	7:00	7:00	7:30	7:00	7:00	7:15	7:15	8:00	7:15	7:00	7:00	7:00	7:00	7:15
Peak Volume	0	3	5	35	126	172	70	20	2	0	0	0	0	421	0	0	6	24	95	157	93	19	10	1	0	0	0	401	0	3	9	58	213	320	162	37	12	1	0	0	0	791
16:00 - 18:00	0	1	7	61	216	310	109	31	3	3	0	0	0	741	1	1	4	15	129	251	170	37	6	1	0	0	0	615	1	2	11	76	345	561	279	68	9	4	0	0	0	1356
%	0%	0%	0%	1%	5%	7%	2%	1%	0%	0%	0%	0%	0%	16%	0%	0%	0%	0%	3%	5%	4%	1%	0%	0%	0%	0%	0%	13%	0%	0%	0%	2%	7%	12%	6%	1%	0%	0%	0%	0%	0%	29%
Peak Hour	16:00	16:30	16:45	16:00	17:00	17:00	16:30	16:00	16:15	16:00	16:00	16:00	16:00	17:00	16:45	16:45	16:30	16:30	17:00	16:00	16:30	16:15	16:15	16:00	16:00	16:00	16:00	16:00	16:45	16:45	16:45	16:00	17:00	16:00	16:30	16:00	16:15	16:00	16:00	16:00	16:00	16:00
Peak Volume	0	1	4	36	117	165	63	18	3	2	0	0	0	378	1	1	4	10	66	145	93	22	5	1	0	0	0	328	1	2	8	44	183	290	156	38	8	3	0	0	0	691

Direction	Percentiles					
	15th	50th	Average	85th	95th	ADT
EASTBOUND	31	37	37	42	45	4722
WESTBOUND	32	38	38	44	47	4308
TOTALS	32	37	37	43	47	9030

Prepared by National Data & Surveying Services

VOLUME

Middle Turnpike W W/O Wedgewood Dr

Day: Thursday
Date: 10/24/2024

City: Manchester
Project #: CT24_410073_001

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	4,722	4,308	9,030

DAILY TOTALS

15-Minutes Interval

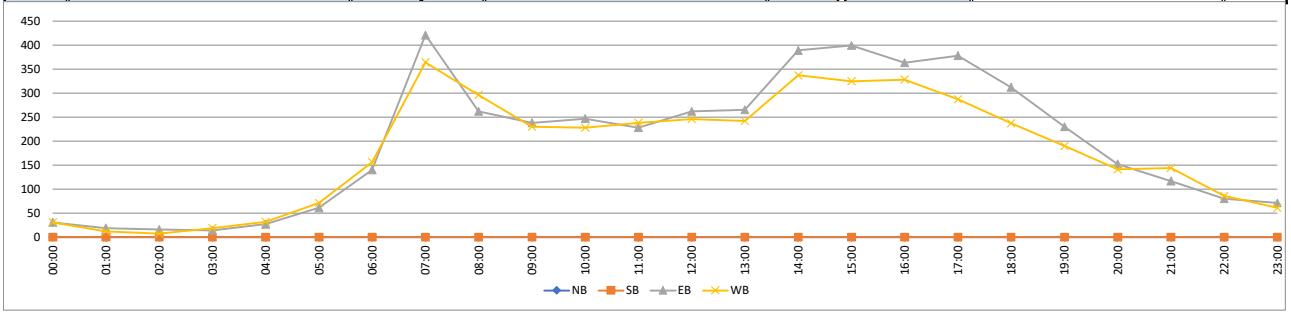
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
0:00			11	11	22	12:00			55	65	120
0:15			9	6	15	12:15			61	57	118
0:30			3	9	12	12:30			71	57	128
0:45			8	5	13	12:45			75	67	142
1:00			8	5	13	13:00			58	65	123
1:15			4	1	5	13:15			65	51	116
1:30			1	2	3	13:30			63	68	131
1:45			6	4	10	13:45			79	58	137
2:00			5	0	5	14:00			101	86	187
2:15			5	4	9	14:15			99	74	173
2:30			2	1	3	14:30			99	80	179
2:45			4	2	6	14:45			90	97	187
3:00			3	6	9	15:00			92	80	172
3:15			3	3	6	15:15			100	82	182
3:30			4	5	9	15:30			113	73	186
3:45			4	5	9	15:45			94	90	184
4:00			5	8	13	16:00			107	109	216
4:15			1	8	9	16:15			80	76	156
4:30			5	9	14	16:30			93	77	170
4:45			16	7	23	16:45			83	66	149
5:00			9	11	20	17:00			94	68	162
5:15			15	18	33	17:15			92	77	169
5:30			11	20	31	17:30			94	82	176
5:45			26	22	48	17:45			98	60	158
6:00			18	26	44	18:00			74	63	137
6:15			18	29	47	18:15			73	58	131
6:30			39	45	84	18:30			87	66	153
6:45			65	56	121	18:45			78	50	128
7:00			86	68	154	19:00			57	65	122
7:15			104	104	208	19:15			64	44	108
7:30			117	94	211	19:30			54	42	96
7:45			114	98	212	19:45			55	39	94
8:00			55	105	160	20:00			44	42	86
8:15			65	57	122	20:15			44	28	72
8:30			75	72	147	20:30			36	35	71
8:45			67	62	129	20:45			28	36	64
9:00			59	69	128	21:00			29	44	73
9:15			63	61	124	21:15			26	28	54
9:30			60	54	114	21:30			28	42	70
9:45			56	46	102	21:45			34	30	64
10:00			67	58	125	22:00			23	16	39
10:15			51	51	102	22:15			18	33	51
10:30			59	68	127	22:30			22	20	42
10:45			70	51	121	22:45			17	17	34
11:00			53	63	116	23:00			19	17	36
11:15			63	59	122	23:15			25	11	36
11:30			51	60	111	23:30			10	22	32
11:45			61	56	117	23:45			17	11	28
TOTALS	0	0	1704	1684	3388	TOTALS	0	0	3018	2624	5642
SPLIT %	0%	0%	50%	50%	38%	SPLIT %	0%	0%	53%	47%	62%

Hourly Intervals

TIME		NB	SB	EB	WB	TOTAL
00:00	01:00			31	31	62
01:00	02:00			19	12	31
02:00	03:00			16	7	23
03:00	04:00			14	19	33
04:00	05:00			27	32	59
05:00	06:00			61	71	132
06:00	07:00			140	156	296
07:00	08:00			421	364	785
08:00	09:00			262	296	558
09:00	10:00			238	230	468
10:00	11:00			247	228	475
11:00	12:00			228	238	466
12:00	13:00			262	246	508
13:00	14:00			265	242	507
14:00	15:00			389	337	726
15:00	16:00			399	325	724
16:00	17:00			363	328	691
17:00	18:00			378	287	665
18:00	19:00			312	237	549
19:00	20:00			230	190	420
20:00	21:00			152	141	293
21:00	22:00			117	144	261
22:00	23:00			80	86	166
23:00	00:00			71	61	132

STATISTICS

	NB	SB	EB	WB	TOTAL
Peak Period	00:00	to	12:00		
Volume			1704	1684	3388
Peak Hour			7:00	7:15	7:15
Peak Volume			421	401	791
Peak Hour Factor			0.900	0.955	0.933
Peak Period	12:00	to	00:00		
Volume			3018	2624	5642
Peak Hour			15:15	15:15	15:15
Peak Volume			414	354	768
Peak Hour Factor			0.916	0.812	0.889
Peak Period	07:00	to	09:00		
Volume			683	660	1343
Peak Hour			7:00	7:15	7:15
Peak Volume			421	401	791
Peak Hour Factor			0.900	0.955	0.933
Peak Period	16:00	to	18:00		
Volume			741	615	1356
Peak Hour			17:00	16:00	16:00
Peak Volume			378	328	691
Peak Hour Factor			0.964	0.752	0.800



Prepared by National Data & Surveying Services

VOLUME

Middle Turnpike W W/O Wedgewood Dr

Day: Saturday
Date: 10/26/2024

City: Manchester
Project #: CT24_410073_001

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,604	3,421	7,025

DAILY TOTALS

15-Minutes Interval

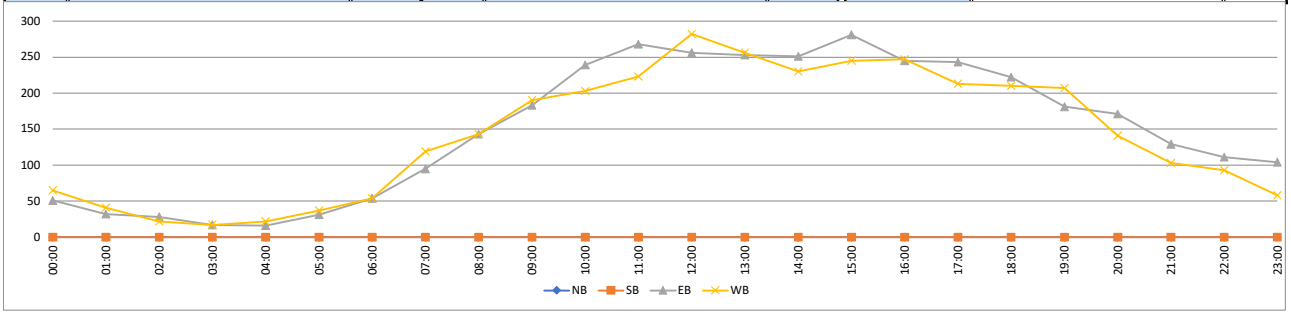
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
0:00			15	16	31	12:00			70	64	134
0:15			12	25	37	12:15			53	82	135
0:30			14	9	23	12:30			72	66	138
0:45			10	15	25	12:45			61	70	131
1:00			10	13	23	13:00			60	59	119
1:15			8	13	21	13:15			70	65	135
1:30			4	7	11	13:30			65	69	134
1:45			10	8	18	13:45			58	63	121
2:00			4	7	11	14:00			56	68	124
2:15			9	4	13	14:15			76	53	129
2:30			10	3	13	14:30			54	53	107
2:45			5	8	13	14:45			65	56	121
3:00			6	3	9	15:00			78	64	142
3:15			6	3	9	15:15			83	67	150
3:30			2	4	6	15:30			64	62	126
3:45			3	7	10	15:45			56	52	108
4:00			3	2	5	16:00			67	64	131
4:15			6	8	14	16:15			60	69	129
4:30			4	4	8	16:30			56	56	112
4:45			3	8	11	16:45			62	58	120
5:00			3	7	10	17:00			63	50	113
5:15			2	14	16	17:15			61	53	114
5:30			8	9	17	17:30			59	53	112
5:45			18	7	25	17:45			60	57	117
6:00			11	8	19	18:00			51	47	98
6:15			8	14	22	18:15			67	69	136
6:30			10	16	26	18:30			49	49	98
6:45			25	16	41	18:45			55	45	100
7:00			15	18	33	19:00			55	61	116
7:15			18	28	46	19:15			37	57	94
7:30			32	33	65	19:30			46	52	98
7:45			30	40	70	19:45			43	37	80
8:00			27	21	48	20:00			55	44	99
8:15			39	38	77	20:15			33	35	68
8:30			44	39	83	20:30			36	29	65
8:45			33	45	78	20:45			47	33	80
9:00			36	46	82	21:00			43	28	71
9:15			48	50	98	21:15			32	24	56
9:30			44	49	93	21:30			32	19	51
9:45			55	45	100	21:45			22	32	54
10:00			68	52	120	22:00			26	19	45
10:15			48	47	95	22:15			22	34	56
10:30			68	60	128	22:30			32	20	52
10:45			55	44	99	22:45			31	20	51
11:00			64	49	113	23:00			26	18	44
11:15			78	55	133	23:15			22	11	33
11:30			55	65	120	23:30			33	14	47
11:45			71	54	125	23:45			23	15	38
TOTALS	0	0	1157	1136	2293	TOTALS	0	0	2447	2285	4732
SPLIT %	0%	0%	50%	50%	33%	SPLIT %	0%	0%	52%	48%	67%

Hourly Intervals

TIME		NB	SB	EB	WB	TOTAL
00:00	01:00			51	65	116
01:00	02:00			32	41	73
02:00	03:00			28	22	50
03:00	04:00			17	17	34
04:00	05:00			16	22	38
05:00	06:00			31	37	68
06:00	07:00			54	54	108
07:00	08:00			95	119	214
08:00	09:00			143	143	286
09:00	10:00			183	190	373
10:00	11:00			239	203	442
11:00	12:00			268	223	491
12:00	13:00			256	282	538
13:00	14:00			253	256	509
14:00	15:00			251	230	481
15:00	16:00			281	245	526
16:00	17:00			245	247	492
17:00	18:00			243	213	456
18:00	19:00			222	210	432
19:00	20:00			181	207	388
20:00	21:00			171	141	312
21:00	22:00			129	103	232
22:00	23:00			111	93	204
23:00	00:00			104	58	162

STATISTICS

	NB	SB	EB	WB	TOTAL
Peak Period	00:00	to	12:00		
Volume			1157	1136	2293
Peak Hour			11:00	11:00	11:00
Peak Volume			268	223	491
Peak Hour Factor			0.859	0.858	0.923
Peak Period	12:00	to	00:00		
Volume			2447	2285	4732
Peak Hour			14:45	12:00	14:45
Peak Volume			290	282	539
Peak Hour Factor			0.873	0.860	0.898
Peak Period	07:00	to	09:00		
Volume			238	262	500
Peak Hour			8:00	8:00	8:00
Peak Volume			143	143	286
Peak Hour Factor			0.813	0.794	0.861
Peak Period	16:00	to	18:00		
Volume			488	460	948
Peak Hour			16:00	16:00	16:00
Peak Volume			245	247	492
Peak Hour Factor			0.914	0.895	0.939



Status: OK East Combined West

MANC-044 - Combined - e/w

[339]-Middle Turnpike West - 1.34 mi West of Broad St

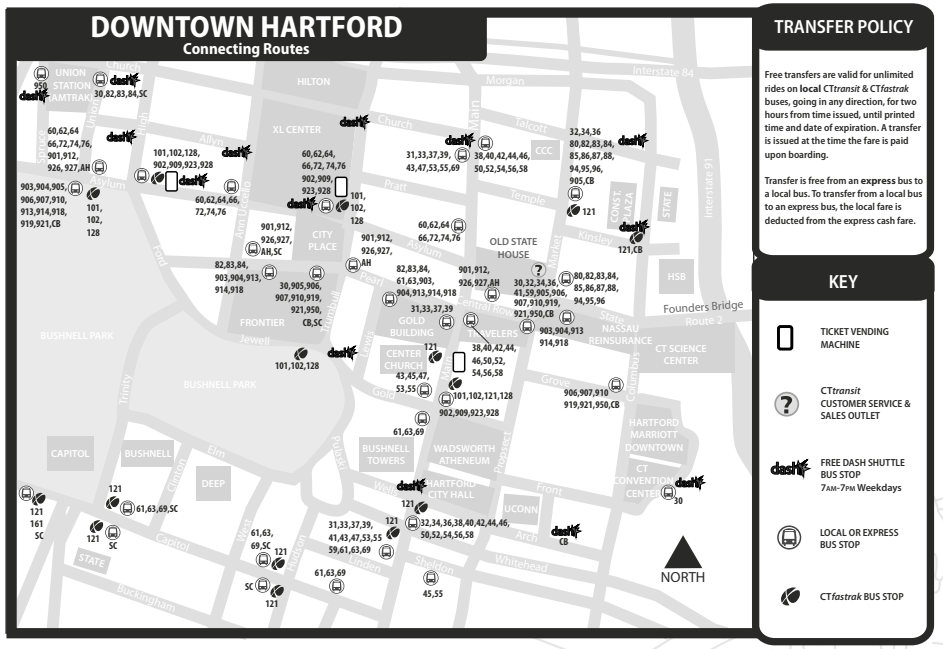
```
Town.............................Manchester
Station.....................................44
Location.............. 41.781503,-72.535687
A.K.A.......................................2044
2015-Minor Arterial  4..........2015-Urban
Start Report............12-Sep-2018 06:00AM
End Report..............13-Sep-2018 06:00AM
Axle Correction Factor.................None
Annualized ADT.........................13300
24-Hour Count...14011 * G4(0.95) = 13310.4
UnRounded AADT.......13310.4 / 1 = 13310.4
 OK  2021 Tue 02-Mar .................10100
 OK  2018 Wed 12-Sep -this report-...13300
 OK  2012 Thu 02-Feb .................15000
 OK  2009 Wed 25-Feb .................14600
Dataset Details............................2
```

	12-Sep Wed	13-Sep Thu
12:00am		89
01:00am		52
02:00am		41
03:00am		45
04:00am		66
05:00am		194
06:00am	471	
07:00am	972	
08:00am	875	
09:00am	792	
10:00am	723	
11:00am	905	
12:00pm	857	
01:00pm	818	
02:00pm	992	
03:00pm	1095	
04:00pm	1090	
05:00pm	1056	
06:00pm	966	
07:00pm	708	
08:00pm	476	
09:00pm	346	
10:00pm	235	
11:00pm	147	
Totals	13524	487

86/88 BURNSIDE AVENUE

Bus Schedule Effective August 22, 2021

86 Mayberry Village via Scotland Rd.
86R Mayberry Village via Roberts St.
88 Manchester Center
88C Lydall St. via Center St.
88M Dept. of Social Services via Middle Turnpike



TRANSFER POLICY

Free transfers are valid for unlimited rides on **local** *CTtransit* & *CTfastrak* buses, going in any direction, for two hours from time issued, until printed time and date of expiration. A transfer is issued at the time the fare is paid upon boarding.

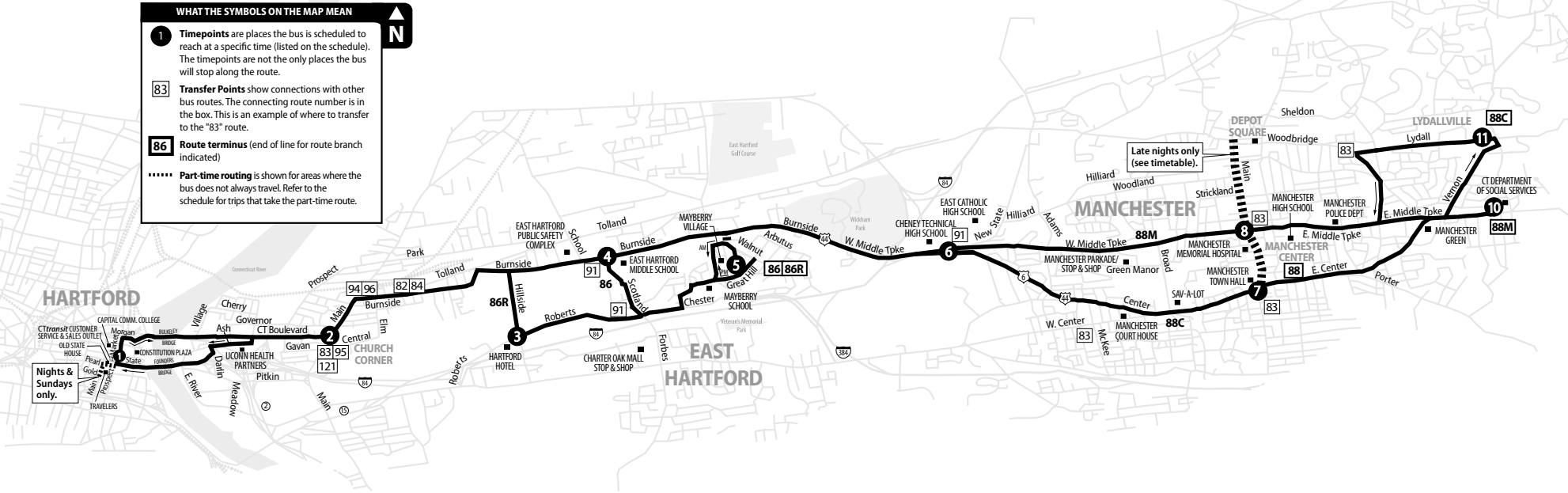
Transfer is free from an **express** bus to a local bus. To transfer from a local bus to an express bus, the local fare is deducted from the express cash fare.

KEY

- TICKET VENDING MACHINE
- *CTtransit* CUSTOMER SERVICE & SALES OUTLET
- FREE DASH SHUTTLE BUS STOP 7AM–7PM Weekdays
- LOCAL OR EXPRESS BUS STOP
- *CTfastrak* BUS STOP

WHAT THE SYMBOLS ON THE MAP MEAN

- 1 **Timepoints** are places the bus is scheduled to reach at a specific time (listed on the schedule). The timepoints are not the only places the bus will stop along the route.
- 83 **Transfer Points** show connections with other bus routes. The connecting route number is in the box. This is an example of where to transfer to the "83" route.
- 86 **Route terminus** (end of line for route branch indicated)
- ····· **Part-time routing** is shown for areas where the bus does not always travel. Refer to the schedule for trips that take the part-time route.



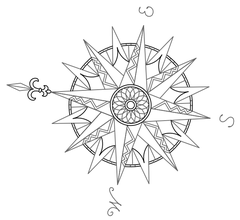
NOTES:

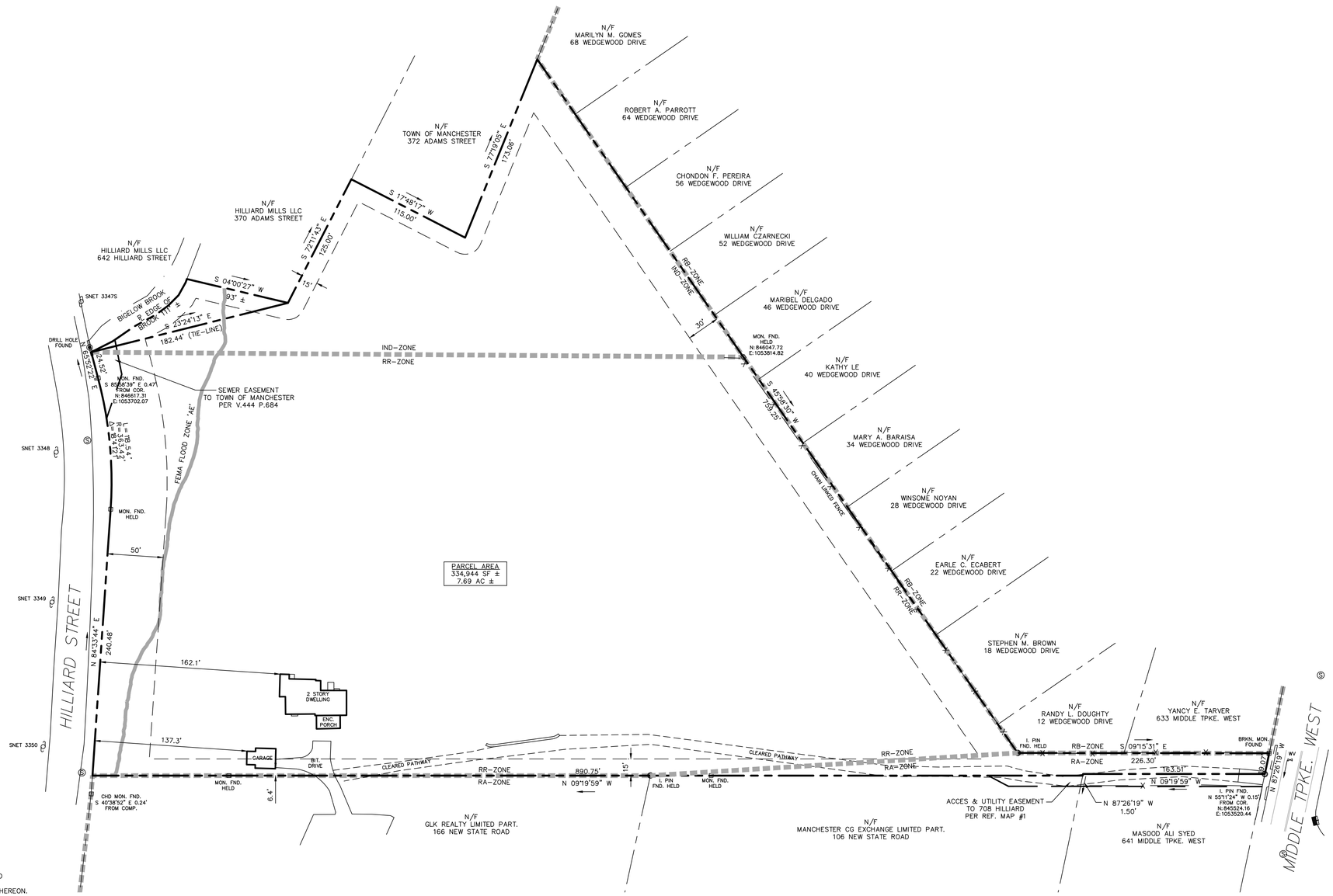
1. THIS SURVEY HAS BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300B-1 THROUGH 20-300B-20, AS REVISED.
2. THE TYPE OF SURVEY PERFORMED IS A LIMITED PROPERTY/BOUNDARY ZONING LOCATION SURVEY.
3. THE BOUNDARY DETERMINATION CATEGORY IS RESURVEY.
4. THIS MAP CONFORMS TO HORIZONTAL ACCURACY CLASS A-2.
5. BEARINGS ON THIS MAP ARE BASED ON THE HORIZONTAL DATUM: TOWN OF MANCHESTER CONTROL NETWORK (NAD 83).
6. ELEVATIONS ON THIS MAP ARE BASED ON VERTICAL DATUM: TOWN OF MANCHESTER CONTROL NETWORK (NAVD 88)
7. THE UNDERGROUND UTILITIES SHOWN ON THIS MAP HAVE BEEN LOCATED BOTH FROM FIELD SURVEY INFORMATION AND FROM EXISTING DRAWINGS NOTED HEREON. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES ON THIS MAP, EITHER CURRENT OR ABANDONED ALTHOUGH EVERY ATTEMPT WAS MADE TO ACCURATELY DEPICT ALL UNDERGROUND UTILITIES. THERE IS NO GUARANTEE TO THE EXACT LOCATION OF UNDERGROUND UTILITIES SHOWN ON THIS MAP.
8. THE PURPOSE OF THIS SURVEY IS TO SHOW EXISTING ZONING BOUNDARIES.
9. TOWN CONTROL POINTS UTILIZED IN THIS SURVEY 770 – N: 848940.087 E:1053627.383 El: 99.58 AND 772 – N: 845532.187 E:1053234.682 El:118.55.
10. A PORTION OF THE SUBJECT PROPERTY IS IN A FLOOD ZONE AE AS DEPICTED AS PER FEMA FLOOD MAP 09003C0391F DATED 9/26/08.

MAP REFERENCES:

1. "PLAN PREPARED FOR RAYMOND F. DAMATO HILLIARD STREET, MANCHESTER, CT." SCALE: 1"=40' FEB. 14, 1989 M.L.R. #1102
2. "COMPILATION PLAN PREPARED FOR RAMIL LLC 708 HILLIARD STREET A/K/A/ 635 MIDDLE TURNPIKE WEST AND 76 WEDGEWOOD DRIVE MANCHESTER, CONNECTICUT" SCALE: 1"=40' FEB. 2024 M.L.R. #2668
3. "PROPERTY OF HERBERT D. & ELEANOR P. DEVOE HILLIARD STREET MANCHESTER, CONN." SCALE: 1"=50' JULY 30, 1956 M.L.R. 5-88
4. "MAP OF WOODRIDGE ADDITION NO. 4 MANCHESTER, CONN. ALEXANDER JARVIS OWNER & DEVELOPER" SCALE: 1"=50' NOV. 21, 1949 M.L.R. 4-54
5. "PLAN FOR HFC SUBDIVISION 649 MIDDLE TURNPIKE WEST MANCHESTER CONNECTICUT" SCALE: 1"=20' JULY 2000 M.L.R. #1310

LOCATION MAP
NTS





PARCEL AREA
334,944 SF ±
7.69 AC ±

50 0 25 50 100
1 inch = 50 feet

LEGEND

PROPERTY LINE
BUILDING SETBACK LINE
500 EXISTING CONTOUR
WATER VALVE
X EXISTING FENCE
CATCH BASIN
SANITARY SEWER MANHOLE
UTILITY POLE
MONUMENT
DRILL HOLE
IRON PIN
ZONE BOUNDARY LINE

MANCHESTER ZONING TABLE (R-R DISTRICT)

STANDARDS	REQUIRED	EXISTING
MAX. BUILDING DENSITY	1.3 HOUSES PER AC.	1 HOUSE
MAX. BLDG. HEIGHT	35'	20' ±
MAX. BLDG. AREA	30 %	0.7 %
MIN. LOT AREA	30,000 SF	334,944 SF ±
SETBACKS:		
FRONT YARD	50'	137.1'
SIDE YARD	15'	6.2'
REAR YARD	30'	> 30'
MIN. LOT FRONTAGE	150'	402.61'
MIN. BLDG. LINE	150'	380.10'
MIN. FLOOR AREA	1,100 SF	4,199 SF
MIN. GROUND FLOOR AREA	750 SF	1,889 SF

ZONING LOCATION SURVEY
PREPARED FOR
RAMIL LLC
708 HILLIARD STREET
MANCHESTER, CONNECTICUT

SCALE: 1" = 50' AUGUST 9, 2024
REVISED: OCTOBER 16, 2024 – TOWN OF MANCHESTER DATUM
JANUARY 3, 2025 – REVISE RA ZONE LINE
PROJ. NO.: 0903

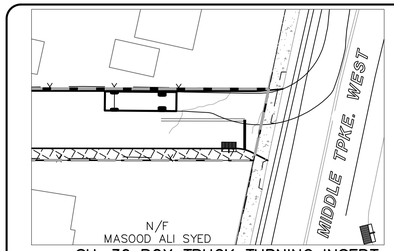
TO THE BEST OF MY KNOWLEDGE AND BELIEF THIS MAP AND SURVEY ARE SUBSTANTIALLY CORRECT AS NOTED HEREON.

THIS MAP IS NOT VALID UNLESS IT BEARS THE LIVE SIGNATURE AND SEAL OF THE UNDERSIGNED LAND SURVEYOR.

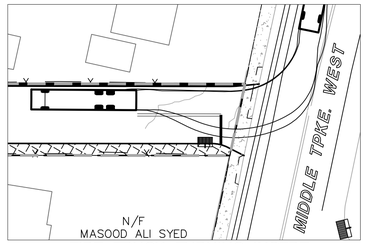
STATE OF CONNECTICUT DANIEL C. LAFERRIERE 70492 LICENSED LAND SURVEYOR

DANIEL C. LAFERRIERE
LICENSED LAND SURVEYOR, REG# 70492

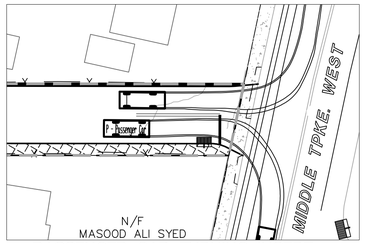
ALL SEASONS Land Surveying
LAND SURVEYING - LAND PLANNING
44 Fair Street
Wallingford, CT 06492
1 John Street
Millerton, NY 12546
Phone: (860) 274-5053
dan@allseasonslandsurveying.com
allseasonslandsurveying.com



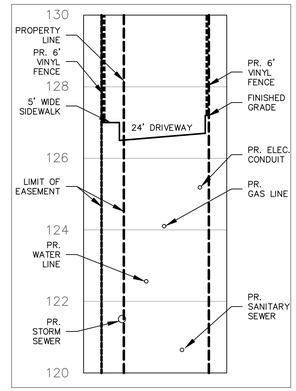
SU-30 BOX TRUCK TURNING INSERT
SCALE 1" = 30'



FIRE TRUCK TURNING INSERT
SCALE 1" = 30'



PASSENGER CAR TURNING INSERT
SCALE 1" = 30'



TYPICAL DRIVEWAY
CROSS SECTION A-A
SCALE 1" = 20' HOR.
SCALE 1" = 2' VER.

SEWER/WATER NOTE:

THE EXISTING DWELLING THAT IS PROPOSED TO BE REMOVED IS CURRENTLY SERVED BY PUBLIC SANITARY SEWER AND PUBLIC WATER, NOT BY WELL AND/OR SEPTIC.

LIGHTING NOTES

ALL LIGHTING FIXTURES SHALL BE EQUIPPED WITH ADJUSTABLE LIGHTING HEADS AND SHIELDS. UPON INSTALLATION, LIGHTING SHALL BE VERIFIED THAT LIGHT IS NOT TRESPASSING ON NEIGHBORING PROPERTIES AND ADJUSTED AS NECESSARY. SITE LIGHTING TEMPERATURE SHALL BE 30K. ALL LIGHTING SHALL BE FULL CUTOFF/DARK SKY COMPLIANT.

RECREATION AREA CALCULATION:

500 SF RECREATION AREA REQUIRED PER DWELLING UNIT:
(53 UNITS * 500 SF) = 26,500 SF REQUIRED
27,950 SF PROVIDED

NO.	REVISION	
1	REVISED PER PRE-APP MEETING	31 OCT 24
2	REVISED PER INITIAL COMMENTS	19 NOV 24
3	REVISED PER COMMENTS	23 DEC 24
4	REVISED ZONE BOUNDARIES	03 JAN 25

Previous Editions Obsolete

40 0 20 40 80
1 inch = 40 feet

OWNER/APPLICANT:

RAMIL, LLC
84 MELHA AVENUE
SPRINGFIELD, MA 01104

SCHEMATIC DESIGN:
SITE LAYOUT
(PRELIMINARY PLAN)

SKY VIEW APARTMENTS
708 HILLIARD STREET
MBL: 4667-1073

MANCHESTER CONNECTICUT

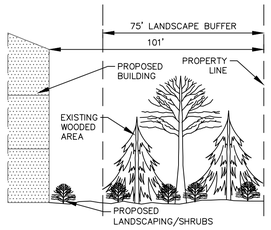
CIVIL C1
CORNERSTONE PROFESSIONAL PARK, SUITE D-101
43 SHERMAN HILL ROAD
WOODBURY (203) 266-0778 CONNECTICUT

STATE OF CONNECTICUT
CURTIS C. JONES
No. 22208
LICENSED PROFESSIONAL ENGINEER

DRAWN:	SQ/CP
APPROVED:	CJ
SCALE:	1" = 40'
DATE:	3 SEP 24
PROJ. NO.:	4235
CADD FILE NAME:	4235 SCHEM
DRAWING NO.:	1 OF 1

LEGEND

- PROPERTY LINE
- BUILDING SETBACK LINE
- EXISTING CONTOUR
- EXISTING WATER VALVE
- EXISTING FENCE
- EXISTING CATCH BASIN
- EXISTING SANITARY SEWER MANHOLE
- EXISTING UTILITY POLE
- EXISTING ZONE BOUNDARY LINE
- PROPOSED LIMITS OF CLEARING
- PROPOSED WATER MANHOLE
- PROPOSED GAS MANHOLE
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED ELECTRICAL MANHOLE
- EXISTING EASEMENT BOUNDARY LINE
- 100' WETLAND REGULATED AREA
- PROPOSED CONTOUR
- 100 YEAR FLOOD ZONE
- PROPOSED WATER LINE
- PROPOSED SANITARY SEWER
- PROPOSED STORM SEWER CATCH BASIN
- PROPOSED STORM SEWER PIPE
- PROPOSED STORM SEWER MANHOLE
- PROPOSED GAS LINE
- PROPOSED ELECTRICAL LINE



TYPICAL LANDSCAPE BUFFER DETAIL
N.T.S.

Slopes Table			
Slope	Color	Area (SF)	Area (AC)
>15.00%		101,507	2.33

PRELIMINARY EARTHWORK ANALYSIS

TOTAL CUT: 5,992 CU. YARDS
TOTAL FILL: 8,380 CU. YARDS
NET FILL: 2,388 CU. YARDS

PARKING CALCULATION:

1 PARKING SPACE PER 1 BEDROOM UNIT: (37 UNITS * 1) = 37 SPACES REQUIRED
2 PARKING SPACES PER 2 BEDROOM UNIT: (16 UNITS * 2) = 32 SPACES REQUIRED
1 VISITOR PARKING SPACE PER 4 UNITS: (53 UNITS/4) = 14 SPACES REQUIRED
83 SPACES REQUIRED - 106 SPACES PROVIDED
5 HANDICAP (1 VAN) REQUIRED PER ADA - 4 HANDICAP AND 1 VAN PROVIDED

GENERAL NOTES:

1. THIS PLAN SHALL BE CONSIDERED A PRELIMINARY SCHEMATIC PLAN. THE NATURE, DIMENSIONS, SIZE, AND LOCATION ARE SUBJECT TO CHANGE WITH FINAL DESIGN.
2. APPROVAL OF UTILITY LAYOUT IS FOR CONCEPT ONLY. DETAILED ENGINEERING PLANS (I.E. FINAL PLAN OF DEVELOPMENT) SHALL BE APPROVED PRIOR TO ACCEPTANCE OF ANY APPLICATIONS FOR WATER/SEWER PERMITS, MAKING REQUEST FOR ANY BUILDING PERMITS, OR CONSTRUCTION OF ANY UTILITIES. REVIEW OF SAID PLANS MAY RESULT IN RELOCATION OF UTILITIES, LANDSCAPING, ADDITIONAL VALVES, HYDRANTS AND/OR SANITARY MANHOLES AND OTHER CHANGES REQUIRED BY THE TOWN.
3. PER USGS SOILS MAPPINGS, THERE ARE NO B/D HYDROLOGIC TYPE SOILS ON THIS PROPERTY WHICH WOULD BE INDICATIVE OF WETLANDS, THEREFORE THERE ARE NO WETLANDS ON SITE PER USGS SOILS MAPPINGS. A SOIL SCIENTIST WILL NEED TO FLAG WETLANDS PRIOR TO CREATION OF SITE PLANS.
4. ALL EXISTING WATER AND SANITARY SEWER SERVICES TO THE SUBJECT PARCEL SHALL BE ABANDONED AT THE MAIN PER WATER AND SEWER DEPARTMENT REQUIREMENTS.

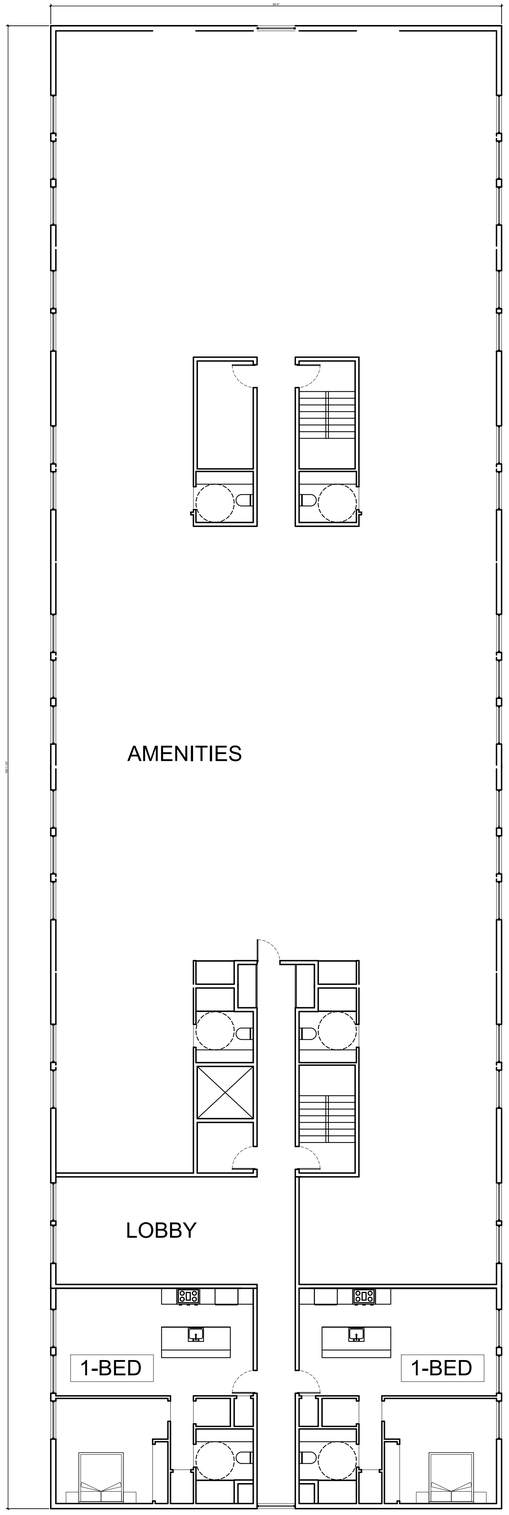
DWELLING UNIT DENSITY CALCULATION:

THE TOTAL NUMBER OF MULTI-FAMILY DWELLING UNITS SHALL NOT EXCEED TEN (10) PER ACRE OF THE MULTI-FAMILY DWELLING SITE EXCLUDING WETLANDS AND SLOPES GREATER THAN 15%
PROPERTY AREA = 334,944 OR 7.69 AC
WETLANDS AREA ON PROPERTY = 0 SF OR 0.00 AC
AREA OF SLOPES GREATER THAN 15% ON PROPERTY = 101,507 OR 2.33 AC
NET AREA = 334,944 SF - 101,507 SF = 233,437 SF OR 5.36 AC
MAXIMUM UNITS = 5.36 ACRES * 10 UNITS/ACRE = 53 UNITS

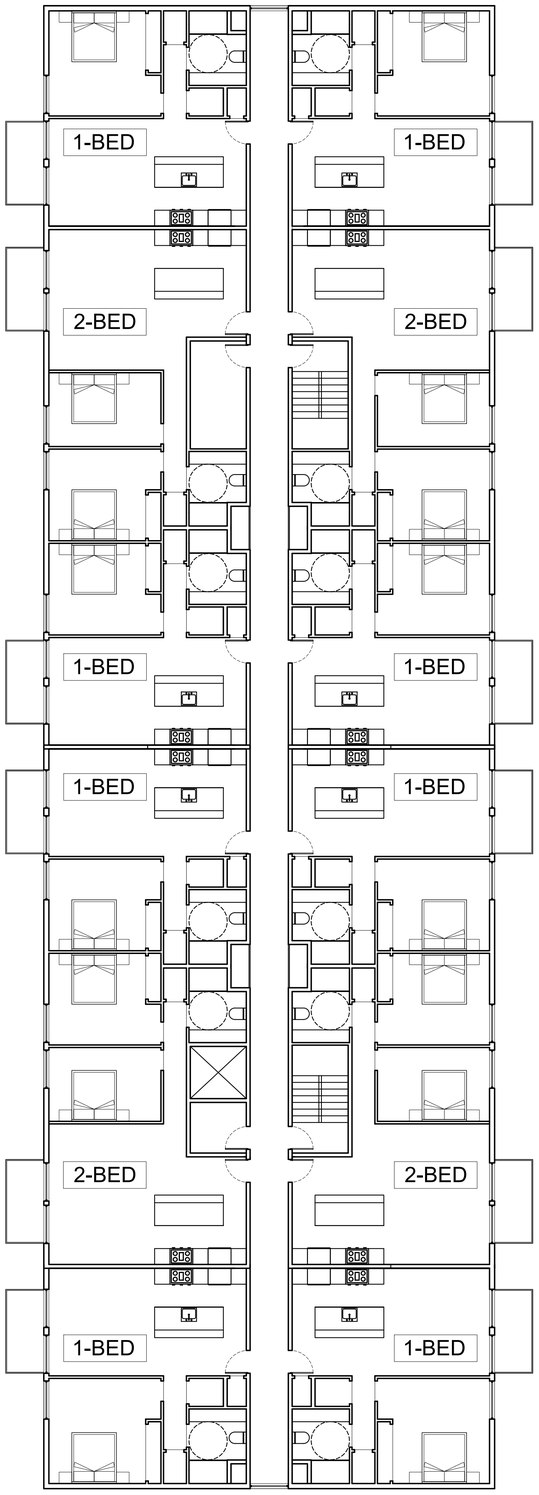
MANCHESTER ZONING TABLE
(PRD DISTRICT - MULTI-FAMILY)

STANDARDS	REQUIRED	EXISTING	PROVIDED
MAX. BLDG. HEIGHT	3 STORIES / 40'	20' ±	<40'
MIN. LOT AREA	4,500 SF / PER UNIT	334,944 SF ±	334,944 SF ±
SETBACKS:			
FRONT YARD	25'	137.1'	101.0'
SIDE YARD	10'	6.2'*	101.0'
REAR YARD	30'	> 30'	191.58'
MIN. LOT FRONTAGE	40' PER UNIT	402.61'	402.61'
MAX. FLOOR AREA	30 %	0.69%	23.13%
MIN. FLOOR AREA	850 SF	4,199 SF	>850 SF
MAX. BUILDING AREA	35 %	0.72%	23.07%
MAXIMUM UNITS	53**	1	53**

* EXISTING NON-CONFORMITY
** PER UNIT DENSITY CALCULATION

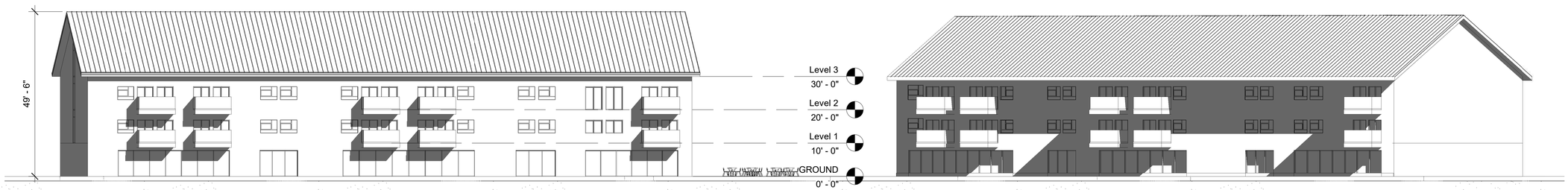


GROUND FLOOR
11,452 SF



12-UNIT 2ND-3RD FLOOR TYP.
11,452 SF

2 South
1 : 100



1 East
1/16" = 1'-0"

COMPANY:

Blackstone Construction Builders LLC
358 Rocky Rapids Rd
Stamford CT 06903
T: 914-713-5217

ARCHITECT:

URBAN OFFICE ARCHITECTURE
34 SPRAIN ROAD
HARTSDALE, NY 10530
T- 917-287-8594
urbanofficearchitecture@gmail.com

CARLO FRUGIUELE ARCHITECT

The Forest

DRAWING SET ISSUED FOR:

SCHEMATICS

DOB/ZONING/LANDMARKSOFFICER/STAMP/SIGN:

REF #/STICKER:

No.	Description	Date
5		
4		
3		
2		
1		

NOTE:

All measurements must be verified by the General Contractor in field. All Change Orders and Construction Change Directives must be approved by the Architect and the Owner before execution. General Contractor to submit (3) three sets of shop drawings to the Architect for approval on all specified items and zones.

NORTH

PROJECT

The Forest

635 Middle Turnpike
West
Manchester, CT 06040

ELEVATIONS

SEAL AND SIGNATURE

DATE:	9/27/2024 2:00:57 PM
PROJECT No.:	LK21-36
DRAWING BY:	Author
CHK BY:	Checker
DWG No.:	

A101.00

OWNER/APPLICANT:

RAMIL, LLC
84 MELHA AVENUE
SPRINGFIELD, MA 01104

RENDERING

SKY VIEW APARTMENTS
708 HILLIARD STREET
MBL: 4667-1073

MANCHESTER CONNECTICUT

CIVIL 1
CORNERSTONE PROFESSIONAL PARK, SUITE D-101
43 SHERMAN HILL ROAD
WOODBURY (203) 266 - 0778 CONNECTICUT

TOWN OF MANCHESTER
PLANNING AND ECONOMIC DEVELOPMENT DEPARTMENT

TO: Planning & Zoning Commission

FROM: Megan Pilla, Principal Development Planner MP

DATE: January 17, 2025

RE: Town of Manchester Public Works Department – 140, 153, 160 & 163 Spruce Street and a portion of the Spruce Street right-of-way
Erosion & Sedimentation Control Plan (ESC-0010-2024)

Introduction

The applicant is seeking certification of an erosion and sedimentation control plan for streetscape and public space improvements at 140, 153, 160 and 163 Spruce Street, including a portion of the Spruce Street right-of-way. The parcels are in the Residence B (RB) zone.

Project Description

The project site, which totals approximately 5.3 acres, includes the former Nathan Hale school parcel, an existing public parking lot, the East Side Resource Center parcels, and a portion of the Spruce Street right-of-way. The applicant intends to implement a variety of enhancements in this area to create a safer and more park-like environment for the surrounding neighborhood. Specifically, work will include:

- Construction of a neighborhood pocket park at 140 Spruce Street
- Installation of bituminous sidewalk connecting Cottage Street to Spruce Street, a playground, and a basketball court on the south side of the former Nathan Hale school parcel
- Installation of a new 17-stall public parking lot at 163 Spruce Street, adjacent to the East Side Resource Center
- Construction of a raised speed table, concrete sidewalks, and other streetscape improvements on Spruce Street between the former Nathan Hale school and the East Side Resource Center

The project is expected to begin in April 2025 and take approximately 6 months to complete.

[*NOTE: A separate application for the conversion of the former Nathan Hale school building to a residential use by a developer will come before the Commission in the near future. This application only includes site improvements that will be completed by the Town.*]

Erosion & Sedimentation Control Plan

Erosion and sedimentation controls for the project, highlighted on sheets 6-8 of the attached plan set, include silt fence along the southern (downhill) side of the project site and inlet protection at all drainage structures. Additional silt fencing and/or silt sacks may be installed as needed under the direction of the Town Engineer.

The total area of site disturbance is approximately 2.1 acres.

Staff Review

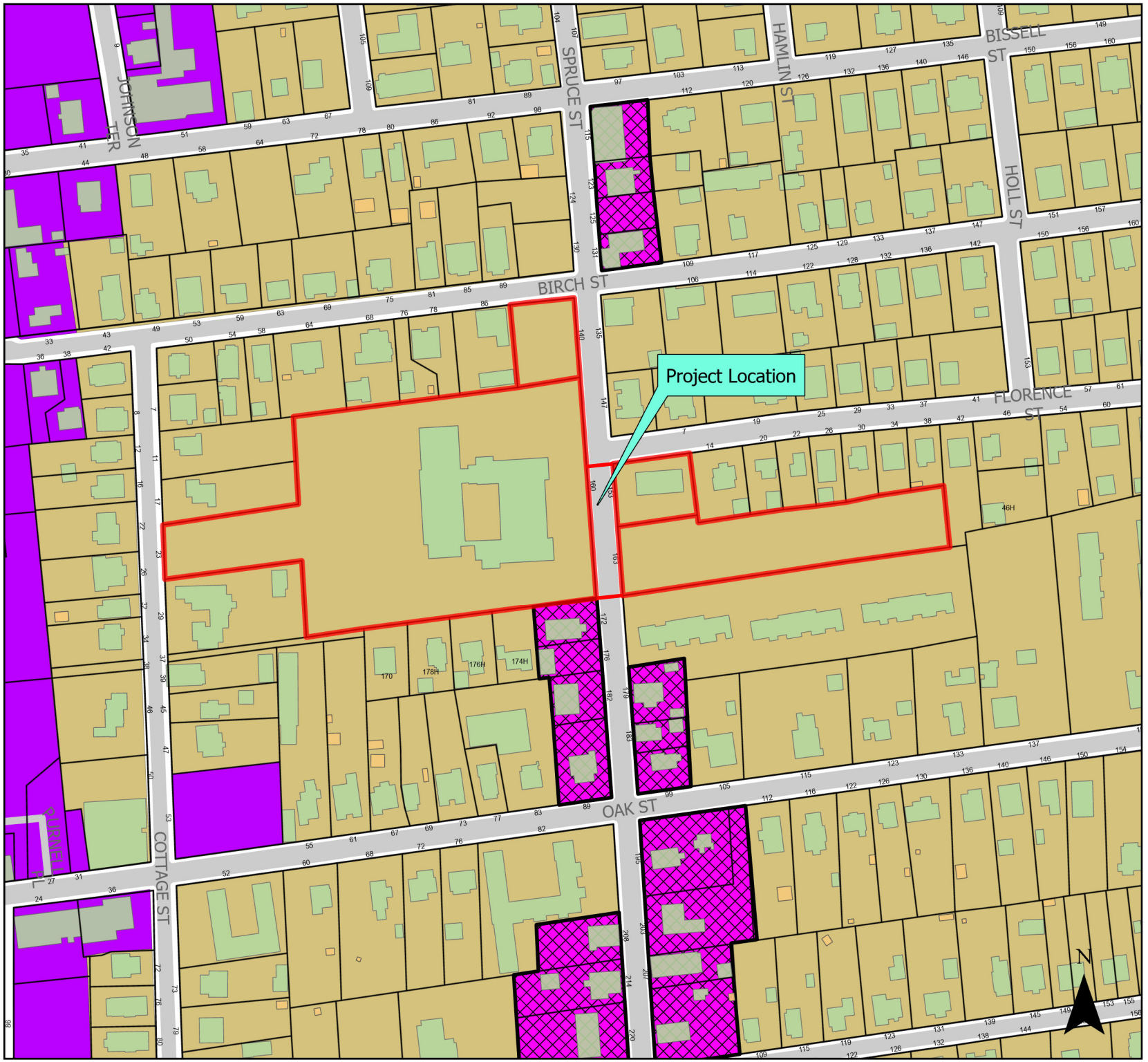
Town staff has reviewed the plans and documents submitted with the application and an update on the status of outstanding comments will be provided at the January 22, 2025 meeting.

mp
R:\Planning\PZC\2025\01 - January 22\Packet\ESC-0010-2024 (Spruce St) - Memo.docx
Attach.

Town of Manchester, CT

Geographic Information Systems

140, 153, 160, & 163 SPRUCE ST & A PORTION OF THE SPRUCE STREET RIGHT-OF-WAY



Legend

- Overlay Zone

Zoning

- CBD - Central Business District
- NB - Neighborhood Business
- RB - Residence B

NOTES:
Planimetric and topographic information were compiled by stereo photogrammetric methods from photography dated April 24, 1999 in accordance with ASPR accuracy standards for 1"=40' large scale Class I maps. Real property compiled from recorded deeds, subdivision plans and other public records. Utility networks compiled from record plans, as-builts and/or field survey data. Aerial photography dated April 24, 1999.

0 35 70 140 210 280 Feet

1 inch = 200 ft

Date: 1/14/2025

PROJECT NARRATIVE

FOR

STREETSCAPE IMPROVEMENTS
SPRUCE STREET AT
NATHAN HALE SCHOOL

November 27, 2024

by

Jeff LaMalva, P.E.,
Town Engineer

Town of Manchester
Department of Public Works
Engineering Division

EROSION & SEDIMENTATION CONTROL PERMIT: APPLICATION SUPPLEMENT

PROPOSED PROJECT INFORMATION:

The Town of Manchester Department of Public Works is proposing to construct a variety of enhancements along Spruce Street in the vicinity of Nathan Hale School to provide a safer and more park-like environment for the surrounding neighborhood and the many activities programmed at the East Side Resource Center. Specifically, work includes the construction of a neighborhood pocket park with spray ground at 140 Spruce Street, the installation of a bituminous concrete sidewalk, playground and basketball court along the south side of Nathan Hale School (160 Spruce Street), the installation of a new parking lot at 163 Spruce Street and the construction of a raised speed table, concrete sidewalks and other streetscape improvements on Spruce Street between Nathan Hale School and the East Side Resource Center.

EXISTING CONDITIONS:

The former Nathan Hale School building is located on a 3.8 acre parcel at 160 Spruce Street. A public parking lot is located on the 0.3 acre parcel at 140 Spruce Street. The East Side Resource Center is located on 1.26 acres at 153-163 Spruce Street. This section of Spruce Street is a hub for the East Side neighborhood and the site of many Recreation Division events, including the very popular Market Nights. The Town has partnered with a private developer to renovate the Nathan Hale School into residential units. That work is not part of this application and will be submitted at a later date.

The site is not located within an aquifer protection area. A preliminary screening through the Natural Diversity Database (NDDB) indicated no critical habitats have been documented in close proximity to the site.

SCOPE OF WORK:

The project primarily includes the following work:

- Construction of a 17 stall parking lot at 163 Spruce Street;
- Construction of a 0.25 acre neighborhood pocket park at 140 Spruce Street, including a small spray ground, pavilions, tables, benches and landscaping;
- Construction of a 720 foot long, 8’ wide bituminous concrete sidewalk connecting Cottage Street and Spruce Street;
- Construction of a new playground and basketball court along the sidewalk between Cottage Street and Spruce Street;
- Construction of a 150’ long raised speed table on Spruce Street;
- Construction of streetscape enhancements on Spruce Street, including widened sidewalks, stamped concrete, pedestrian level lighting, fencing and landscaping;

TRAFFIC STATEMENT:
The project is not expected to have a significant impact on traffic. The project does include traffic calming measures such as the raised speed table and rectangular rapid flashing beacons (RRFB’s).

UTILITY STATEMENT:
The project includes the installation of a new electric service from Spruce Street and a new water service from Birch Street. Other than the resetting of water valve boxes to grade, there are no expected impacts to existing utilities in the area.

PLANS:

The following plan is included as part of the submission:

1. Streetscape Improvements – Spruce Street at Nathan Hale, Erosion and Sedimentation Control Permit, dated November 2024, prepared by Town of Manchester Public Works Department Engineering Division

EROSION & SEDIMENTATION CONTROL:

Control measures will include installation of silt fence along the southern project limits downgrade of the proposed construction. Further installation of silt fencing and/or silt sacks will be as needed at the direction of the Engineer. All sedimentation and erosion control devices will be installed in accordance with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control prior to the start of construction and maintained or replaced by the Contractor.

DISTRUBANCES:

The overall total site disturbance is approximately 2.1 acres.

STORMWATER MANAGEMENT:

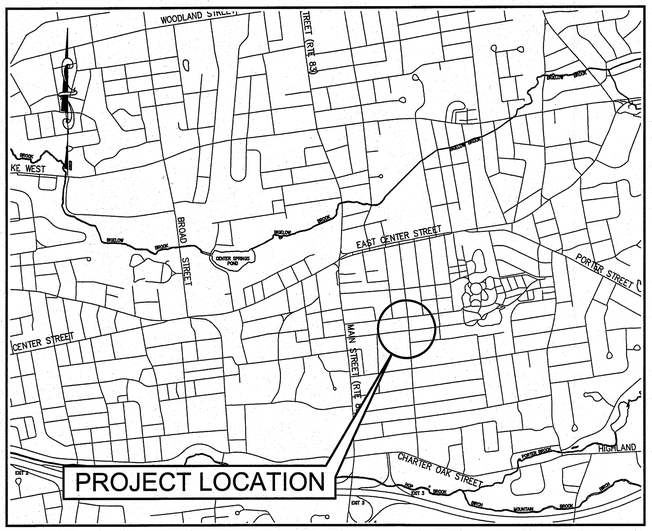
The drywell system for the existing parking lot at 140 Spruce Street will be used to drain most of the proposed pocket park and sprayground with a new overflow connection to Spruce Street proposed. A rain garden is also proposed as part of the pocket park. A new infiltration system consisting of two catch basins and perforated pipe will collect runoff from the newly proposed parking lot at 163 Spruce Street. Overall, there is no net increase of impervious surface for this project.

PROJECT SCHEDULE:

The project is expected to start in April 2025 and take approximately 6 months to complete.

PROJECT FUNDING:

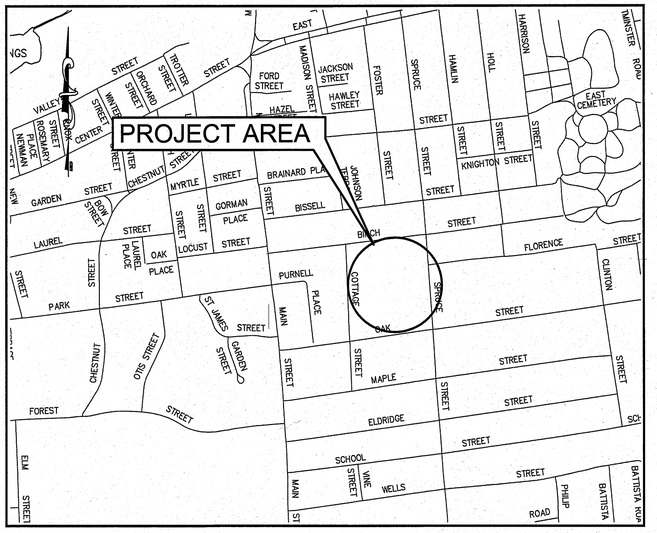
Funding for the project is provided by the American Rescue Plan Act (ARPA) and the Community Development Block Grant Program (CDBG).



LOCATION MAP
1" = 1500'

TOWN OF MANCHESTER

PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION



SITE MAP
1" = 600'

STREETSCAPE IMPROVEMENTS
SPRUCE STREET AT NATHAN HALE SCHOOL

EROSION AND SEDIMENTATION CONTROL PERMIT

NOVEMBER 2024

DESIGN STANDARD : TOWN OF MANCHESTER PUBLIC IMPROVEMENT STANDARDS, EFFECTIVE DATE OCTOBER 31, 2020, AS AMENDED

DATUMS : HORIZONTAL DATUM: TOWN OF MANCHESTER CONTROL NETWORK (NAD83 AS ESTABLISHED IN 1998)

VERTICAL DATUM: TOWN OF MANCHESTER CONTROL NETWORK (NAVD88 USING GEOID 96)

STANDARD SPECIFICATIONS : SEE CONTRACT DOCUMENTS

DESIGN SCALES : PLAN: 1" = 20'
OTHER SCALES AS NOTED

LIST OF DRAWINGS

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	TYPICAL SECTION AND NOTES
3-5	DEMOLITION PLANS
6-8	SITE PLANS
9-10	PAVEMENT MARKING AND SIGNING PLAN
11	POCKET PARK DETAIL PLAN
12	POCKET PARK LANDSCAPING PLAN
13	TRAFFIC PLAN
14-18	ELECTRICAL PLANS
19-22	DETAILS
1 OF 1	ALTERNATE BID NO. 1 BASKETBALL COURT

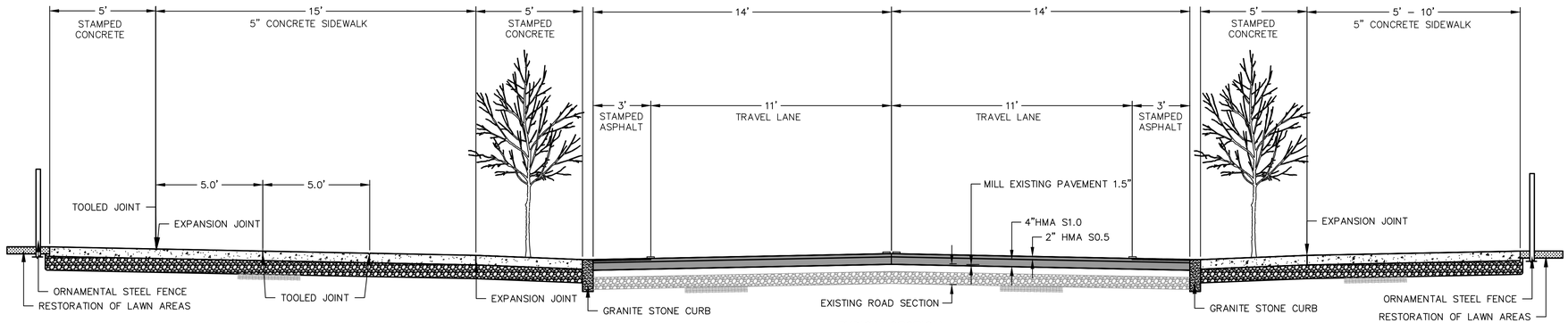
APPROVED
PLANNING AND ZONING COMMISSION
MANCHESTER, CT

DATE: _____

SIGNED: _____

DESIGNED BY:
TOWN OF MANCHESTER
ENGINEERING DIVISION

JEFF LAMALVA
TOWN ENGINEER
P.E. NO. 20967



TYPICAL SECTION
SPRUCE STREET AT RAISED SPEED TABLE
NO SCALE

NOTES

1. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE "MANCHESTER PUBLIC IMPROVEMENT STANDARDS", EFFECTIVE OCTOBER 31, 2020, AS AMENDED AND THE STATE OF CONN. DEPT. OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS, BRIDGES, FACILITIES AND INCIDENTAL CONSTRUCTION, FORM 818, DATED 2020, INCLUDING ANY SUPPLEMENTS.
2. ALL ELEVATIONS ARE BASED ON THE TOWN OF MANCHESTER CONTROL NETWORK.
3. IMPLEMENTING WORKER SAFETY AND HEALTH PROTOCOLS THAT ADDRESS COMPLIANCE WITH ALL RULES, LAWS AND REGULATIONS REGARDING SAFETY AND RISK OF EXPOSURE TO PHYSICAL AND CHEMICAL HAZARDS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ALL EMPLOYEES OF THE CONTRACTOR AND SUBCONTRACTORS ARE TO WEAR REFLECTIVE VESTS AND HARD HATS AT ALL TIMES WHEN ON THE PROJECT SITE.
4. A PRECONSTRUCTION MEETING WITH TOWN STAFF IS REQUIRED PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY.
5. THE CONTRACTOR SHALL PHASE CONSTRUCTION OPERATIONS TO MINIMIZE THE SIZE OF DISTURBED AREAS AND PERIOD OF TIME THESE AREAS ARE LEFT UNSTABILIZED AND SUBJECT TO EROSION. THIS INCLUDES, BUT IS NOT LIMITED TO, INSTALLATION OF DRAINAGE SYSTEMS DURING THE EARLY STAGES OF CONSTRUCTION AND LIMITING LENGTHS OF RECLAMATION AND FULL–DEPTH ROAD RECONSTRUCTION AREAS TO ALSO LESSEN IMPACTS TO VEHICLE AND PEDESTRIAN TRAVEL THROUGH THE PROJECT AREA.
6. THE CONTRACTOR SHALL TAKE CARE NOT TO DISTURB EXISTING MONUMENTATION THAT MAY BE PRESENT NEAR THE PROJECT AREA.
7. THE CONTRACTOR IS RESPONSIBLE TO OBTAIN ALL REQUIRED PERMITS AND PAY ASSOCIATED FEES PRIOR TO ANY CONSTRUCTION ACTIVITY.
8. THE CONTRACTOR SHALL CONFINE ALL OPERATIONS AND ACTIVITIES FOR CONSTRUCTION PURPOSES WITHIN THE STREET LINE AND LIMITS OF EASEMENTS UNLESS SHOWN OTHERWISE ON THE PLANS.
9. THE CONTRACTOR SHALL RESTORE TWO LANES OF TRAFFIC ON SPRUCE STREET STREET AT THE END OF EACH WORK DAY. IT IS ANTICIPATED THAT THE ROAD WILL REMAIN OPEN AT ALL TIMES WITH ALTERNATING ONE LANE TRAFFIC DURING CONSTRUCTION.
10. THE CONTRACTOR SHALL COMMIT SUFFICIENT RESOURCES TO THE PROJECT TO ENSURE THE PROJECT IS COMPLETED WITHIN THE ALLOTTED CONTRACT TIME. ONCE MOBILIZED, THE CONTRACTOR SHALL WORK CONTINUOUSLY ON THE PROJECT UNTIL COMPLETION. ANY UNAUTHORIZED VACATING OF THE JOBSITE IS SUBJECT TO PENALTIES DESCRIBED UNDER THE "LIQUIDATED DAMAGES" SECTION OF THE CONTRACT SPECIFICATIONS.
11. THE CONTRACTOR SHALL NOT STORE CONSTRUCTION EQUIPMENT OR MATERIALS WITHIN THE PUBLIC RIGHT–OF–WAY.
12. CONSTRUCTION ENTRANCES ARE NOT SHOWN ON THE PLAN; HOWEVER, THEY SHALL BE INSTALLED WHERE DIRECTED BY THE ENGINEER DURING CONSTRUCTION FOR EGRESS FROM TEMPORARY STOCKPILE AREAS. THE PROPOSED LOCATION OF STOCKPILE AREAS SHALL BE IDENTIFIED BY THE CONTRACTOR.
13. NO WORK SHALL COMMENCE UNTIL ALL CONSTRUCTION AREA SIGNS ARE IN PLACE.
14. THE CONTRACTOR SHALL PROVIDE TEMPORARY ACCESS TO ALL DRIVEWAYS AT ALL TIMES.
15. ALL GRASSED AREAS DISTURBED BY THE CONTRACTOR SHALL BE REPLACED WITH TOPSOIL, FERTILIZED AND SEEDED AS PER THE SPECIFICATIONS. CONTRACTOR SHALL MAKE ALL EFFORTS TO MINIMIZE THE LIMITS OF DISTURBANCE AND ASSOCIATED RESTORATION THAT IS REQUIRED.
16. ANY DRIVEWAYS, SIDEWALKS, CURB AND LAWN AREAS LOCATED ON PRIVATE PROPERTY OR WITHIN THE RIGHT–OF–WAY THAT ARE IMPACTED DURING CONSTRUCTION SHALL BE RESTORED TO PRE–CONSTRUCTION CONDITIONS AS IDENTIFIED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. THE REQUIRED LIMITS OF SUCH RESTORATION SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD. RESTORATION ON PRIVATE PROPERTY SHALL BE COMPLETED AS PROMPTLY AS PRACTICAL WITHIN THIRTY (30) CALENDAR DAYS OF COMPLETING WORK ON THE PROPERTY.
17. ALL SEDIMENT CONTROL SYSTEMS SHALL MEET THE "GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL" AS PREPARED BY THE CONNECTICUT COUNCIL ON SOIL AND WATER CONSERVATION, LATEST REVISION. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION, MAINTENANCE AND REPAIR OF EROSION CONTROLS REQUIRED FOR THE PROJECT. ADDITIONAL EROSION CONTROLS SHALL BE INSTALLED BY THE CONTRACTOR FOR TEMPORARY STOCKPILING OF EXCAVATED MATERIAL AND WHERE DEEMED NECESSARY BY THE ENGINEER. EROSION CONTROLS SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL THE SITE IS STABILIZED AND THE ENGINEER APPROVES THEIR REMOVAL.
18. SILT SACKS SHALL BE INSTALLED IN ALL EXISTING AND PROPOSED CATCH BASINS WITHIN THE PROJECT AREA AND WHERE DIRECTED BY THE ENGINEER. SILT SACKS SHALL BE THE APPROPRIATE TYPE FOR CATCH BASINS WITH AND WITHOUT CURB INLETS.
19. HORIZONTAL AND VERTICAL LOCATIONS OF PROPOSED WORK MAY BE ADJUSTED TO FIT EXISTING FIELD CONDITIONS WITH THE APPROVAL OF THE ENGINEER.
20. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER IF CONDITIONS ENCOUNTERED IN THE FIELD ARE DIFFERENT THAN INFORMATION SHOWN ON THE PLANS.
21. THE EXISTENCE OF UTILITIES AND APPURTENANCES AS SHOWN ON THESE DRAWINGS ARE FOR REFERENCE ONLY. THE EXACT SIZE, LOCATION, TYPE, AND ELEVATION OF ALL UTILITIES WITHIN ALL WORK AREAS SHALL BE THOROUGHLY INVESTIGATED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING "CALL–BEFORE–YOU–DIG" AT 1–800–922–4455 AND MUST HAVE ALL UTILITIES MARKED ON THE GROUND PRIOR TO THE START OF CONSTRUCTION.
22. THE QUANTITIES AS INDICATED IN THE CONTRACT DOCUMENTS ARE APPROXIMATE AND MAY NOT INDICATE THE ACTUAL QUANTITIES OF WORK REQUIRED. THE CONTRACTOR MUST VERIFY ALL QUANTITIES.
23. SURPLUS EXCAVATED MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR SHALL DISPOSE OF SURPLUS EXCAVATED MATERIAL IN ACCORDANCE WITH STATE AND FEDERAL REGULATIONS.
24. PROPOSED STRUCTURE FRAME ELEVATIONS IDENTIFIED ON THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL SET FRAME ELEVATIONS AS REQUIRED BASED ON EXISTING FEATURES AND GRADES IN THE VICINITY AS DIRECTED BY THE ENGINEER.
25. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY HANDLING OF ALL STORMWATER RUNOFF DURING CONSTRUCTION. METHODS OF HANDLING RUNOFF SHALL BE APPROVED BY THE ENGINEER.
26. AT THE END OF EACH WORKING DAY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONNECTING NEW DRAINAGE SYSTEMS TO EXISTING. ALL DRAINAGE SYSTEMS WITHIN THE CONSTRUCTION LIMITS SHALL BE MAINTAINED BY THE CONTRACTOR.
27. FOR CONNECTIONS TO EXISTING DRAINAGE STRUCTURES, THE CONTRACTOR SHALL VERIFY THE EXISTING STRUCTURE INVERTS, NOTIFY THE ENGINEER IF A DISCREPANCY EXISTS, AND ADJUST THE PIPE SLOPES AS DIRECTED.
28. ANY CORING OR OTHER MODIFICATIONS TO EXISTING STRUCTURES REQUIRED FOR CONNECTING NEW PIPES SHALL BE INCLUDED IN THE LINEAR FOOT COST FOR THE ASSOCIATED PIPE INSTALLATION.
29. ALL SIDEWALKS, DRIVEWAY APRONS AND SIDEWALK RAMPS SHALL BE CONSTRUCTED TO PROVIDE HANDICAPPED ACCESSIBILITY IN ACCORDANCE WITH THE CONNECTICUT BUILDING CODE.
30. ALL CONCRETE SIDEWALK RAMPS SHALL BE INSTALLED WITH DETECTABLE WARNING TILES.
31. WHERE DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL PROVIDE SLEEVES FOR ALL SIGNS LOCATED WITHIN THE LIMITS OF PROPOSED CONCRETE SIDEWALK.
32. FOR SIDEWALKS AND RAMPS, A CLEARANCE OF 48" (36" MINIMUM) MUST BE PROVIDED BETWEEN ANY OBSTRUCTION AND THE BACK EDGE OF THE SIDEWALK AND RAMP OR FACE OF CURB.
33. FINAL LOCATION OF ALL PROPOSED UNDERGROUND UTILITIES SHALL BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.
34. RECORD DRAWINGS SHALL BE SUBMITTED TO THE ENGINEERING DIVISION UPON COMPLETION OF THE WORK IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROCURING ALL INFORMATION NECESSARY TO GENERATE THE DRAWINGS. A REDLINED PROGRESS SET OF DRAWINGS SHALL BE MAINTAINED DAILY AND BE AVAILABLE TO THE ENGINEER AT ALL TIMES.
35. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ANY TEMPORARY THRUST RESTRAINT THAT IS REQUIRED.

APPROVED
PLANNING AND ZONING COMMISSION MANCHESTER, CT

DATE: _____

SIGNED: _____

TOWN OF MANCHESTER
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
494 MAIN STREET – P.O. BOX 191
MANCHESTER, CT 06045–0191

LEGEND

= WETLANDS BOUNDARY	= LIGHT POLE
= RETAINING WALL	= CONIFEROUS TREE
= GUIDE RAIL	= DECIDUOUS TREE
= STONE WALL	= SANITARY MANHOLE
= STOCKADE FENCE	= DRAINAGE MANHOLE
= WIRE FENCE	= CATCH BASIN
= CHAIN LINK FENCE	= CULVERT END
= PROPERTY LINE	= HYDRANT
= RAILROAD TRACKS	= CURB STOP
= SILT FENCE	= WATER VALVE
= CONCRETE MONUMENT	= BUTTERFLY VALVE
= GRANITE MONUMENT	= BLOW OFF
= IRON PIPE	= SIGN
= IRON ROD	= DOUBLE POST SIGN
= CONTROL POINT	= MAIL BOX
= DRILL HOLE	= BOLLARD
= UTILITY POLE	= CONTROLLER CABINET
= UTILITY POLE WITH LIGHT	= GAS GATE
= TRAFFIC SPAN POLE	= TELEPHONE BOX
= ELECTRIC BOX	= CATV TUBE
= WETLAND FLAG	

PROJECT NUMBER
2023111

FILENAME
2023111-PLAN.DWG

NO.	DATE	FILE
–	11/08/24	FOR BIDDING
	11/27/24	ADDENDUM NO. 1

DRAWN BY: JL
CHECKED BY: JL
RELEASED BY: TB

DRAWING SCALE
HORIZONTAL: 1" = 20' VERTICAL: ––– OR AS NOTED
20 10 0 20
GRAPHIC SCALE

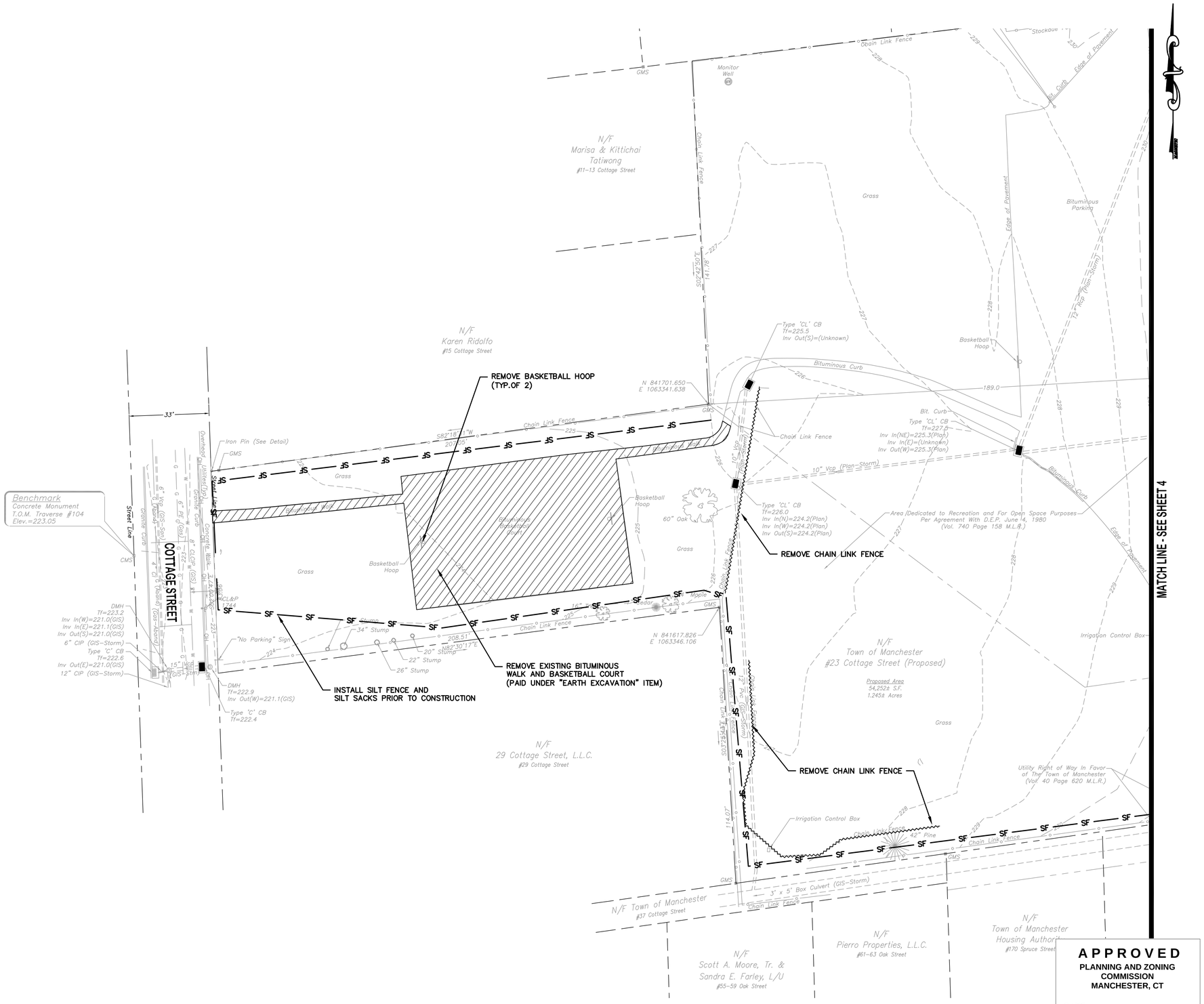
DATUM
HORIZONTAL: NAD83 VERTICAL: NAVD88

PROJECT LOCATION
SPRUCE STREET MANCHESTER, CT

PROJECT TITLE
STREETSCAPE IMPROVEMENTS SPRUCE STREET AT NATHAN HALE SCHOOL

SHEET TITLE
TYPICAL SECTION AND NOTES

SHEET NUMBER
2 of 22



APPROVED
PLANNING AND ZONING COMMISSION
MANCHESTER, CT

DATE: _____

SIGNED: _____

TOWN OF MANCHESTER
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
494 MAIN STREET – P.O. BOX 191
MANCHESTER, CT 06045–0191

LEGEND

= WETLANDS BOUNDARY	= LIGHT POLE
= RETAINING WALL	= CONIFEROUS TREE
= GUIDE RAIL	= DECIDUOUS TREE
= STONE WALL	= SANITARY MANHOLE
= STOCKADE FENCE	= DRAINAGE MANHOLE
= WIRE FENCE	= CATCH BASIN
= CHAIN LINK FENCE	= CULVERT END
= PROPERTY LINE	= HYDRANT
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PROJECT NUMBER
2023111

FILENAME
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NO.	DATE	FILE
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DATUM
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PROJECT LOCATION
SPRUCE STREET
MANCHESTER, CT

PROJECT TITLE
STREETSCAPE IMPROVEMENTS
SPRUCE STREET AT
NATHAN HALE SCHOOL

SHEET TITLE
DEMOLITION PLAN

SHEET NUMBER
3 of 22

MATCH LINE - SEE SHEET 5

MATCH LINE - SEE SHEET 3

REMOVE EXISTING BITUMINOUS CONCRETE PAVEMENT (PAID UNDER "EARTH EXCAVATION" ITEM)

REMOVE EXISTING CONCRETE CURB

REMOVE CONCRETE SIDEWALK (TYP.)

EXISTING GRANITE STONE CURB TO REMAIN

REMOVE EXISTING BITUMINOUS CONCRETE PAVEMENT (PAID UNDER "PERMANENT PAVEMENT REPAIR" ITEM)

MILL BITUMINOUS CONCRETE PAVEMENT (2" DEPTH)

REMOVE SIGN

REMOVE GRANITE STONE CURB

REMOVE SIGN

REMOVE EXISTING CONCRETE SIDEWALK

REMOVE EXISTING CONCRETE CURB

REMOVE GRANITE STONE CURB

REMOVE EXISTING BITUMINOUS CONCRETE PAVEMENT (PAID UNDER "PERMANENT PAVEMENT REPAIR" ITEM)

REMOVE ORNAMENTAL STEEL FENCE

REMOVE EXISTING BITUMINOUS CONCRETE PAVEMENT (PAID UNDER "EARTH EXCAVATION" ITEM)

REMOVE SIGN

REMOVE AND RELOCATE GAZEBO FROM TO

REMOVE PLAYGROUND EQUIPMENT

REMOVE RAILROAD TIES (PAID UNDER "EARTH EXCAVATION" ITEM)

REMOVE TIMBER RAIL

REMOVE CONCRETE SIDEWALK (TYP.)

REMOVE TREE

REMOVE ORNAMENTAL STEEL FENCE

REMOVE BUSH (PAID UNDER "CLEARING AND GRUBBING" ITEM)

REMOVE TIMBER RAIL

REMOVE GRANITE STONE CURB

MILL BITUMINOUS CONCRETE PAVEMENT (2" DEPTH)

CUT BITUMINOUS CONCRETE PAVEMENT

REMOVE MULCH (PAID UNDER "EARTH EXCAVATION" ITEM)

INSTALL SILT FENCE AND SILT SACKS PRIOR TO CONSTRUCTION

REMOVE EXISTING CONCRETE SIDEWALK AND APRON (PAID UNDER "REMOVE CONCRETE SIDEWALK" ITEM)

REMOVE SIGN

REMOVE GRANITE STONE CURB

REMOVE STONE (PAID UNDER "EARTH EXCAVATION" ITEM)

FLORENCE STREET

SPRUCE STREET

N/F Town of Manchester #153 Spruce Street

N/F Town of Manchester Revised #160 Spruce Street

N/F John J. Siscavage, Jr. #14 Florence Street

N/F Debra Woods. #20 Florence Street

N/F Town of Manchester #163 Spruce Street

N/F Colonial Manor Association of Manchester

N/F James P. Quinlan #172-172 1/2 & 174 Spruce Street

N/F Misbah U. Choudhury #171 1/2 Spruce Street

N/F Michael & Lu-Anne L. Rehmer #176 1/2 Spruce Street

N/F Kenny Calle #178 1/2 Spruce Street

Benchmark
Drill Hole In Conc. Walk
T.O.M. Traverse #100
Elev.=237.08

Benchmark
Top of Spike
T.O.M. Traverse #106
Elev.=236.00

Benchmark
Top of Spike
T.O.M. Traverse #107
Elev.=232.52

Total Existing Area
165,125± S.F.
3.791± Acres

Revised New Area
110,874± S.F.
2.545± Acres

APPROVED
PLANNING AND ZONING COMMISSION
MANCHESTER, CT
DATE: _____
SIGNED: _____

TOWN OF MANCHESTER
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
494 MAIN STREET – P.O. BOX 191
MANCHESTER, CT 06045-0191

LEGEND

- WETLANDS BOUNDARY
- RETAINING WALL
- GUIDE RAIL
- STONE WALL
- STOCKADE FENCE
- WIRE FENCE
- CHAIN LINK FENCE
- PROPERTY LINE
- RAILROAD TRACKS
- SILT FENCE
- CONCRETE MONUMENT
- GRANITE MONUMENT
- IRON PIPE
- IRON ROD
- CONTROL POINT
- DRILL HOLE
- UTILITY POLE
- UTILITY POLE WITH LIGHT
- TRAFFIC SPAN POLE
- ELECTRIC BOX
- WETLAND FLAG
- LIGHT POLE
- CONIFEROUS TREE
- DECIDUOUS TREE
- SANITARY MANHOLE
- DRAINAGE MANHOLE
- CATCH BASIN
- CULVERT END
- HYDRANT
- CURB STOP
- WATER VALVE
- BUTTERFLY VALVE
- BLOW OFF
- SIGN
- DOUBLE POST SIGN
- MAIL BOX
- BOLLARD
- CONTROLLER CABINET
- GAS GATE
- TELEPHONE BOX
- CATV TUBE

PROJECT NUMBER
2023111

FILENAME
2023111-PLAN.DWG

NO.	DATE	FILE
–	11/08/24	FOR BIDDING

DRAWN BY: JL
CHECKED BY: JL
RELEASED BY: TB

DRAWING SCALE
HORIZONTAL: 1" = 20' VERTICAL: ---
OR AS NOTED
20 10 0 20
GRAPHIC SCALE

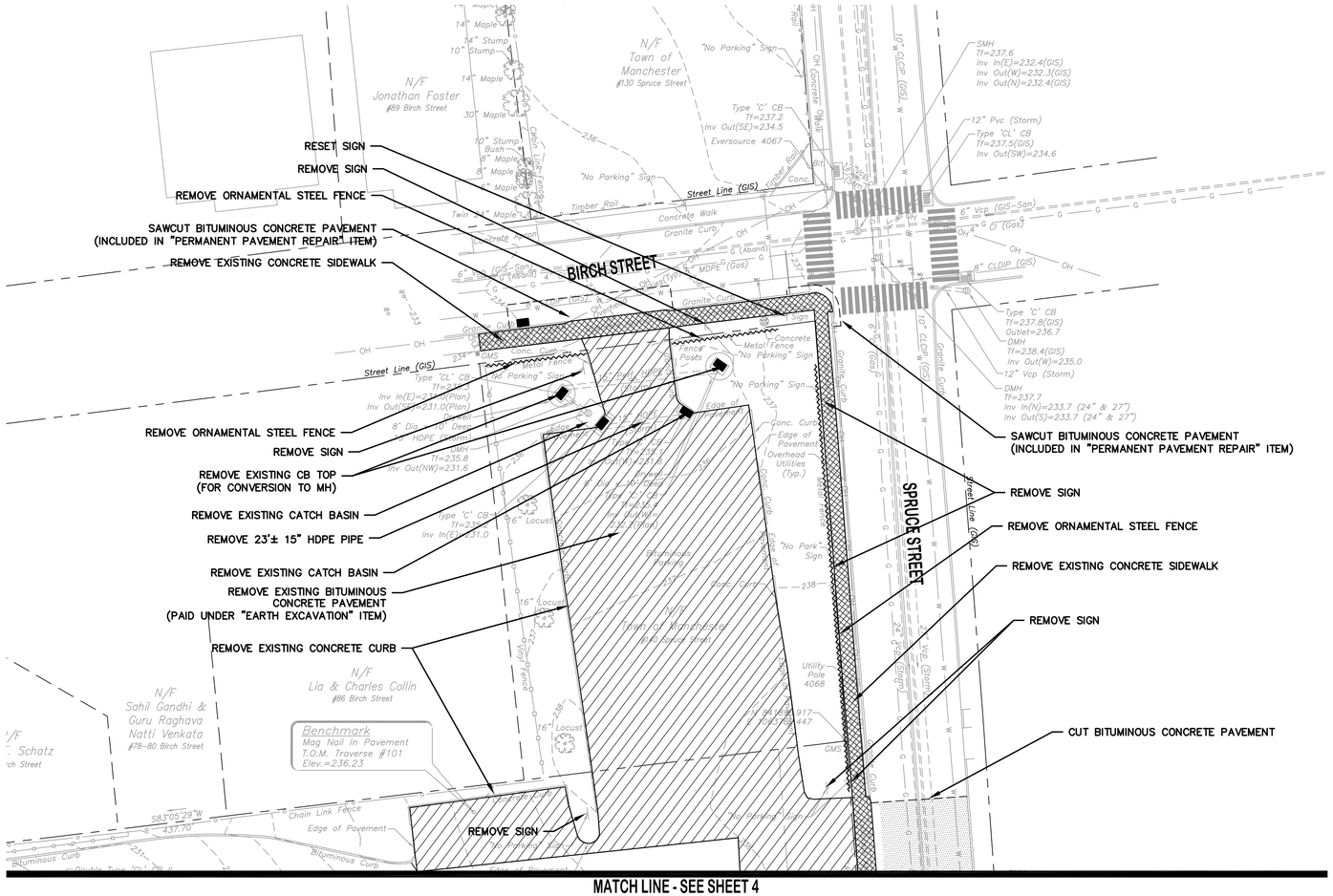
DATUM
HORIZONTAL: NAD83 VERTICAL: NAVD88

PROJECT LOCATION
SPRUCE STREET
MANCHESTER, CT

PROJECT TITLE
STREETSCAPE IMPROVEMENTS
SPRUCE STREET AT
NATHAN HALE SCHOOL

SHEET TITLE
DEMOLITION PLAN

SHEET NUMBER
4 of 22



TOWN OF MANCHESTER
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
494 MAIN STREET – P.O. BOX 191
MANCHESTER, CT 06045–0191

LEGEND

- WETLANDS BOUNDARY
- RETAINING WALL
- GUIDE RAIL
- STONE WALL
- STOCKADE FENCE
- WIRE FENCE
- CHAIN LINK FENCE
- PROPERTY LINE
- RAILROAD TRACKS
- SILT FENCE
- CONCRETE MONUMENT
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- IRON PIPE
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PROJECT NUMBER
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PROJECT LOCATION
SPRUCE STREET MANCHESTER, CT

PROJECT TITLE
STREETSCAPE IMPROVEMENTS SPRUCE STREET AT NATHAN HALE SCHOOL

SHEET TITLE
DEMOLITION PLAN

SHEET NUMBER
5 of 22

APPROVED
PLANNING AND ZONING COMMISSION MANCHESTER, CT
DATE: _____
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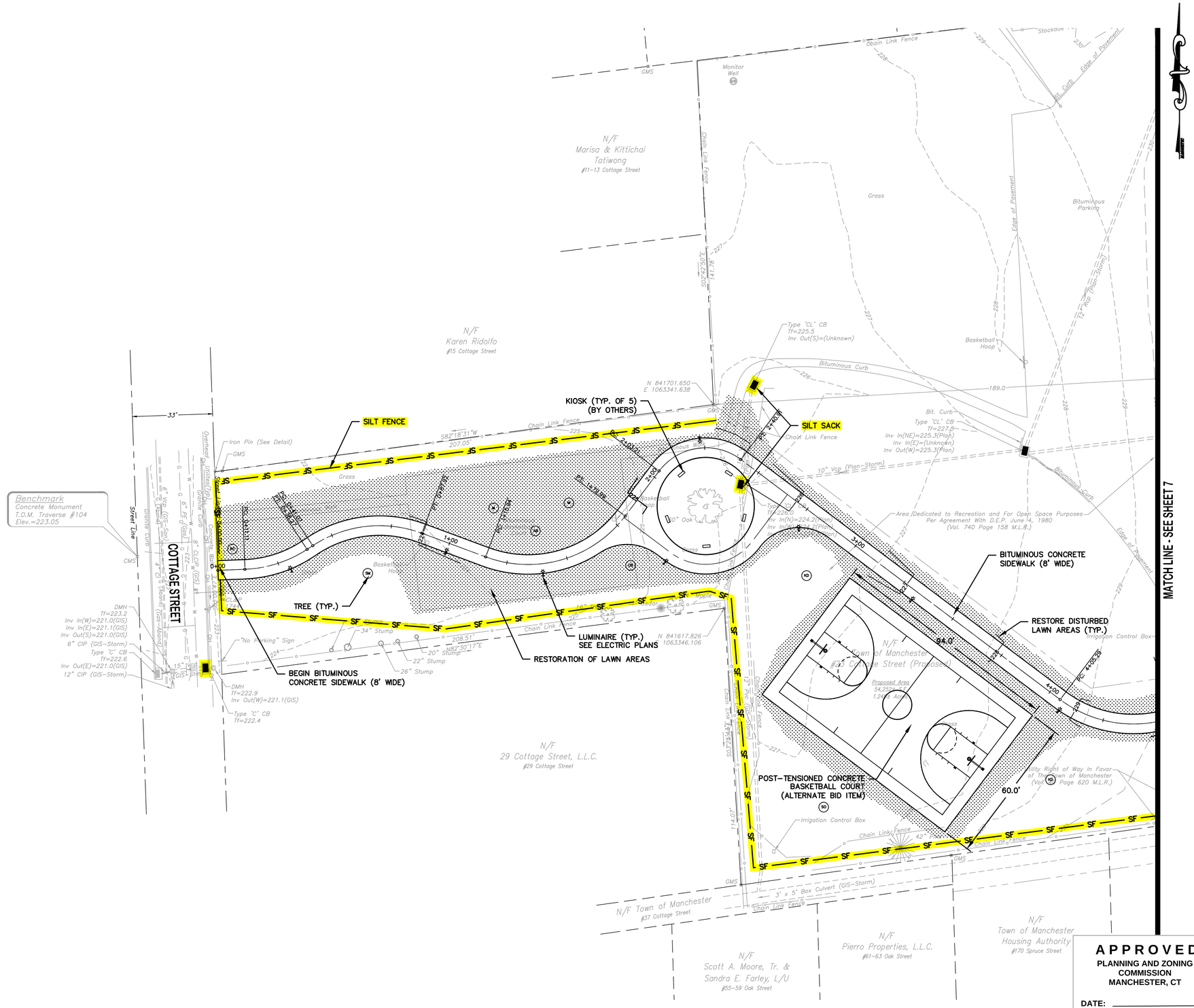

APPROVED
PLANNING AND ZONING COMMISSION
MANCHESTER, CT
DATE: _____
SIGNED: _____

TOWN of MANCHESTER CONNECTICUT SEAL

TOWN OF MANCHESTER
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
494 MAIN STREET – P.O. BOX 191
MANCHESTER, CT 06045-0191

LEGEND

WETLANDS BOUNDARY	LIGHT POLE
RETAINING WALL	CONIFEROUS TREE
GUIDE RAIL	DECIDUOUS TREE
STONE WALL	SANITARY MANHOLE
STOCKADE FENCE	DRAINAGE MANHOLE
WIRE FENCE	CATCH BASIN
CHAIN LINK FENCE	CULVERT END
PROPERTY LINE	HYDRANT
RAILROAD TRACKS	CURB STOP
SILT FENCE	WATER VALVE
CONCRETE MONUMENT	BUTTERFLY VALVE
GRANITE MONUMENT	BLOW OFF
IRON PIPE	SIGN
IRON ROD	DOUBLE POST SIGN
CONTROL POINT	MAIL BOX
DRILL HOLE	BOLLARD
UTILITY POLE	CONTROLLER CABINET
UTILITY POLE WITH LIGHT	GAS GATE
TRAFFIC SPAN POLE	TELEPHONE BOX
ELECTRIC BOX	CATV TUBE
WETLAND FLAG	

PROJECT NUMBER
2023111

FILENAME
2023111-PLAN.DWG

NO.	DATE	FILE
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	11/27/24	ADDENDUM NO. 1

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PROJECT LOCATION
SPRUCE STREET
MANCHESTER, CT

PROJECT TITLE
STREETSCAPE IMPROVEMENTS
SPRUCE STREET AT
NATHAN HALE SCHOOL

SHEET TITLE
SITE PLAN

SHEET NUMBER
6 of 22

MATCH LINE - SEE SHEET 8

MATCH LINE - SEE SHEET 6

FLORENCE STREET

SPRUCE STREET

- BEGIN GRANITE STONE CURB
- PERMANENT PAVEMENT REPAIR (COLLECTOR)
- EXTRUDED CONCRETE CURB
- CUT BITUMINOUS CONCRETE PAVEMENT
- 6" CONCRETE SIDEWALK RAMP (TYPE 10B)
- SILT SACK (TYP.)
- CUT BITUMINOUS CONCRETE PAVEMENT
- 12" HDPE SLOTTED TRENCH DRAIN (SEE DETAIL)
- 6" CONCRETE SIDEWALK RAMP
- BEGIN GRANITE STONE CURB
- APPROACH RAMP (SEE DETAIL)
- BEGIN RAISED BITUMINOUS SPEED TABLE
- RECTANGULAR RAPID FLASHING BEACON (SEE TRAFFIC PLAN)
- 5" CONCRETE SIDEWALK
- PLANTER (TYP.)
- STAMPED CONCRETE
- RESET VALVE BOX (WATER)
- TREE WELL (TYP.)
- STAMPED ASPHALT TREATMENT
- 48 LF – ORNAMENTAL STEEL FENCE
- BIKE RACK (TYP. OF 3)
- STAMPED CONCRETE
- 5" CONCRETE SIDEWALK
- RECTANGULAR RAPID FLASHING BEACON (SEE TRAFFIC PLAN)
- 80 LF – ORNAMENTAL STEEL FENCE
- STAMPED ASPHALT TREATMENT
- MATCH INTO EXISTING WALK
- PLANTER (TYP.)
- 72 LF – ORNAMENTAL STEEL FENCE
- 5" CONCRETE SIDEWALK
- STAMPED CONCRETE
- LUMINAIRE (TYP.)
- CUT BITUMINOUS CONCRETE PAVEMENT
- RESTORE DISTURBED LAWN AREAS (TYP.)
- ELECTRIC SERVICE PEDESTAL (SEE ELECTRIC PLANS)
- BIKE RACK (TYP. OF 3)
- STAMPED CONCRETE
- BITUMINOUS CONCRETE DRIVEWAY
- RECTANGULAR RAPID FLASHING BEACON (SEE TRAFFIC PLAN)
- END GRANITE STONE CURB
- REINFORCED CONCRETE SIDEWALK
- 5" CONCRETE SIDEWALK
- BITUMINOUS CONCRETE DRIVEWAY APRON
- STAMPED CONCRETE
- BITUMINOUS CONCRETE SIDEWALK (8' WIDE)
- TREE (TYP.)
- PLAYGROUND LOCATION
- LUMINAIRE (TYP.)
- 6' WOOD PRIVACY FENCE
- CONCRETE PAD (PAY ITEM "REINFORCED CONCRETE SIDEWALK)
- 6' WOOD PRIVACY FENCE
- 5" CONCRETE SIDEWALK AND CURB MONOLITHIC (7' WIDE)
- 6" CONCRETE SIDEWALK RAMP
- RELOCATE GAZEBO FROM TO
- TYPE "C" CB STA 0+28.43, 11.92'R TF=±236.4 INV IN (W)=232.00
- 20 LF – 12" PERFORATED HDPE PIPE
- RECTANGULAR RAPID FLASHING BEACON (SEE TRAFFIC PLAN)
- TYPE "C" CB STA 0+05.31, 11.85'R TF=±236.2 INV OUT (E)=232.00
- END GRANITE STONE CURB
- REINFORCED CONCRETE SIDEWALK (TYP. ACROSS DRIVEWAYS)
- BITUMINOUS CONCRETE DRIVEWAY APRON
- END RAISED BITUMINOUS SPEED TABLE
- STAMPED CONCRETE
- APPROACH RAMP (SEE DETAIL)
- GRANITE STONE CURB
- MILL AND OVERLAY BITUMINOUS CONCRETE PAVEMENT (1.5" DEPTH)
- CUT BITUMINOUS CONCRETE PAVEMENT

Benchmark
Drill Hole In Conc. Walk
T.O.M. Traverse #100
Elev.=237.08

Benchmark
Top of Spike
T.O.M. Traverse #106
Elev.=236.00

Benchmark
Top of Spike
T.O.M. Traverse #107
Elev.=232.62

N/F Town of Manchester
Revised #160 Spruce Street
Total Existing Area 165,125± S.F. 3.791± Acres
Revised New Area 110,874± S.F. 2.545± Acres

N/F Town of Manchester
#153 Spruce Street

N/F John J. Siscavage, Jr.
#14 Florence Street

N/F Debra Woods.
#20 Florence Street

N/F Town of Manchester
#163 Spruce Street

N/F Association of Manchester
#173 Spruce Street

N/F Misbah U. Choudhury
#174 1/2 Spruce Street

N/F James P. Quinlivan
#172-172 1/2 Spruce Street

N/F Kenny Calle
#178 1/2 Spruce Street

N/F Michael & Lu-Anne L. Reimer
#176 1/2 Spruce Street

APPROVED
PLANNING AND ZONING COMMISSION
MANCHESTER, CT
DATE: _____
SIGNED: _____

TOWN of MANCHESTER CONNECTICUT SEAL

TOWN OF MANCHESTER
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
494 MAIN STREET – P.O. BOX 191
MANCHESTER, CT 06045-0191

LEGEND

= WETLANDS BOUNDARY	= LIGHT POLE
= RETAINING WALL	= CONIFEROUS TREE
= GUIDE RAIL	= DECIDUOUS TREE
= STONE WALL	= SANITARY MANHOLE
= STOCKADE FENCE	= DRAINAGE MANHOLE
= WIRE FENCE	= CATCH BASIN
= CHAIN LINK FENCE	= CULVERT END
= PROPERTY LINE	= HYDRANT
= RAILROAD TRACKS	= CURB STOP
= SILT FENCE	= WATER VALVE
= CONCRETE MONUMENT	= BUTTERFLY VALVE
= GRANITE MONUMENT	= BLOW OFF
= IRON PIPE	= SIGN
= IRON ROD	= DOUBLE POST SIGN
= CONTROL POINT	= MAIL BOX
= DRILL HOLE	= BOLLARD
= UTILITY POLE	= CONTROLLER CABINET
= UTILITY POLE WITH LIGHT	= GAS GATE
= TRAFFIC SPAN POLE	= TELEPHONE BOX
= ELECTRIC BOX	= CATV TUBE
= WETLAND FLAG	

PROJECT NUMBER
2023111

FILENAME
2023111-PLAN.DWG

NO.	DATE	FILE
–	11/08/24	FOR BIDDING
	11/27/24	ADDENDUM NO. 1

DRAWN BY: JL
CHECKED BY: JL
RELEASED BY: TB

DRAWING SCALE
HORIZONTAL: 1" = 20' VERTICAL: ---
OR AS NOTED
20 10 0 20
GRAPHIC SCALE

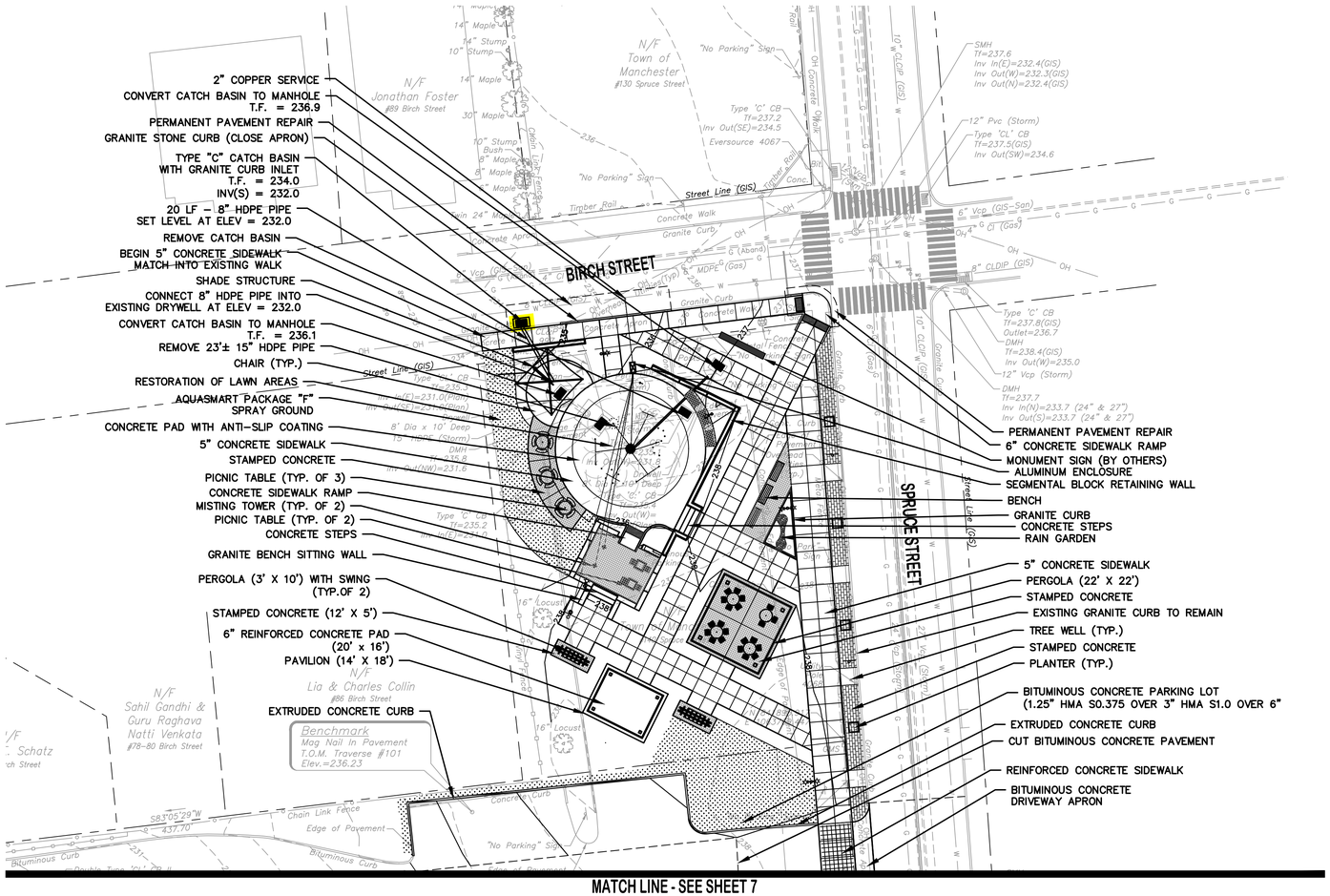
DATUM
HORIZONTAL: NAD83 VERTICAL: NAVD88

PROJECT LOCATION
SPRUCE STREET
MANCHESTER, CT

PROJECT TITLE
STREETSCAPE IMPROVEMENTS
SPRUCE STREET AT
NATHAN HALE SCHOOL

SHEET TITLE
SITE PLAN

SHEET NUMBER
7 of 22



SEE SHEET 11 FOR DETAILED PARK PLAN

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8 of 22

MATCH LINE - SEE SHEET 10

"NO PARKING" SIGN (TOWN FURNISHED)

4" DOUBLE YELLOW CENTERLINE

14'±

14'±

FLORENCE STREET

STANDARD CROSSWALK

4" DOUBLE YELLOW CENTERLINE

"NO PARKING" SIGN (TOWN FURNISHED)

11'

11'

"NO PARKING" SIGN (TOWN FURNISHED)

4" WHITE EDGELINE

"NO PARKING" SIGN (TOWN FURNISHED)

"NO PARKING" SIGN (TOWN FURNISHED)

SEE TRAFFIC PLAN FOR RRFB SIGNS (TYP.)

STANDARD CROSSWALK

APPROACH/DEPARTURE MARKING (TYP.)

4" WHITE EPOXY RESIN PAVEMENT MARKING

18'

9' TYP.

SPRUCE STREET

"SCHOOL CHILDREN CROSSING AHEAD SIGN" (TOWN FURNISHED)

"PED/BIKE AHEAD" SIGN (TOWN FURNISHED) (SEE TRAFFIC PLAN FOR LOCATION)

Approx. Underground Telephone

Approx. Underground Electric

Brick Retaining Wall

Concrete Curb

Street Line (GIS)

Street Line

Grass

Bollard

Brick Wall

Bit.

Sill=231.0

Sill=239.5

Sill=240.1

Sill=239.6

Sill=233.1

Existing Building

Window Well (Typical)

Sill=239.2

Wood Platform

Existing Shed

Existing Garage

Gravel

Planter

Planters

Timber Rail

Elec. Cover

Stone

Gazebo

Overgrown

GMS

Edge of Pavement

Utility Pole

Light Pole

Tree

Mulched Flowerbed Area

SF

APPROVED
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SEE TRAFFIC PLANS FOR RRFB AND RELATED SIGNING AND PAVEMENT MARKINGS

TOWN OF MANCHESTER
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

494 MAIN STREET – P.O. BOX 191
MANCHESTER, CT 06045-0191

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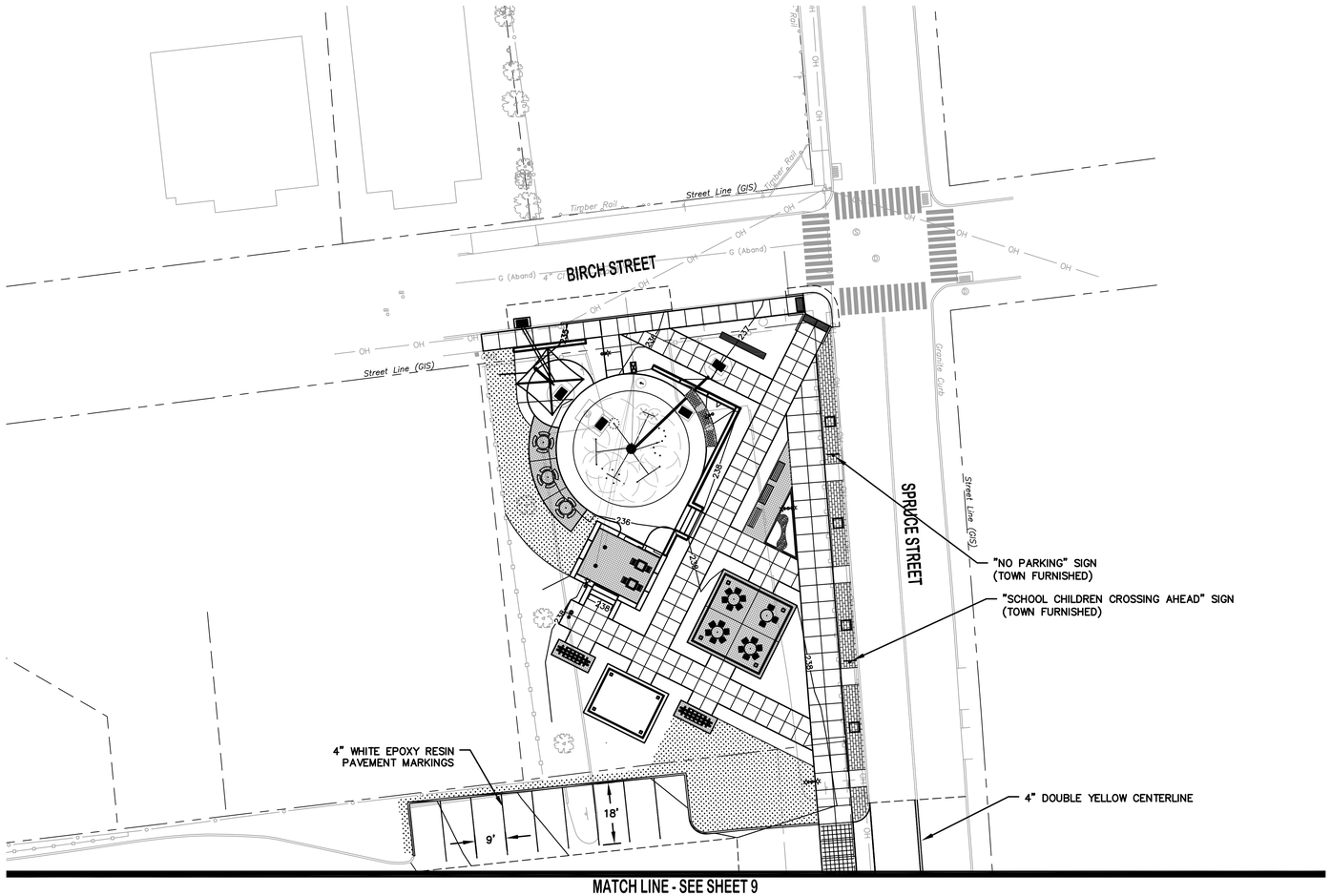
PROJECT TITLE
STREETSCAPE IMPROVEMENTS
SPRUCE STREET AT
NATHAN HALE SCHOOL

SHEET TITLE
PAVEMENT MARKINGS AND SIGNING PLAN

SHEET NUMBER
9 of 22



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MANCHESTER, CT 06045–0191

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MANCHESTER, CT**

PROJECT TITLE
**STREETSCAPE IMPROVEMENTS
SPRUCE STREET AT
NATHAN HALE SCHOOL**

SHEET TITLE
**PAVEMENT MARKINGS
AND SIGNING PLAN**

SHEET NUMBER
10 of 22

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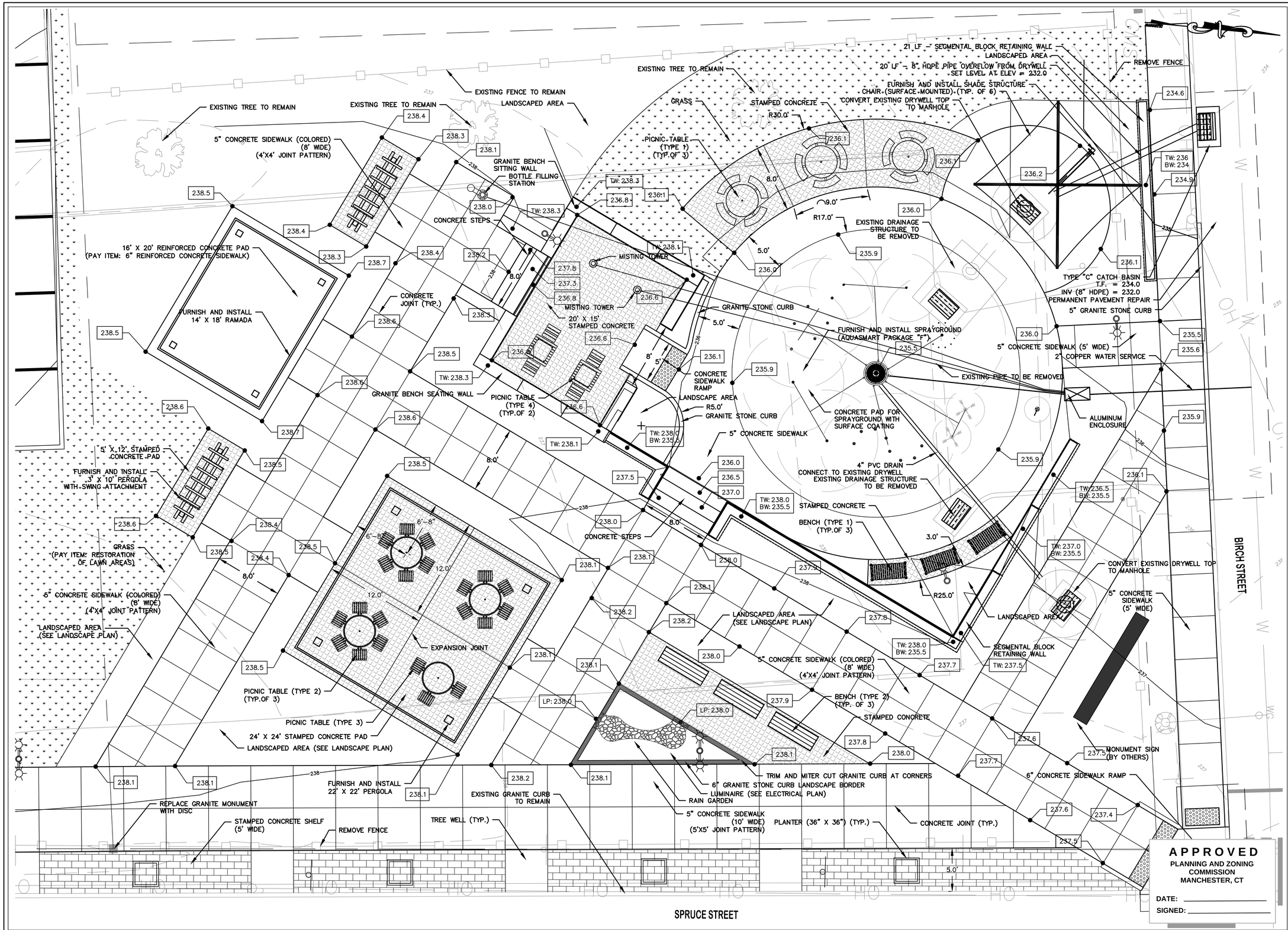

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WETLAND FLAG	

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SPRUCE STREET
MANCHESTER, CT

PROJECT TITLE
STREETSCAPE IMPROVEMENTS
SPRUCE STREET AT
NATHAN HALE SCHOOL

SHEET TITLE
POCKET PARK
DETAIL PLAN

SHEET NUMBER
11 of 22

TREES			
SYMBOL	PLANT NAME	SIZE	QUANTITY
AB	AMERICAN BEECH	2" CAL.	1
BB	BABY BLUE EYES SPRUCE	4' TO 5'	2
BP	BLUE POINT JUNIPER	6' TO 7'	8
CA	CRAB APPLE	2" CAL.	1
CB	CLUMP BIRCH	10' TO 12'	3
DL	DWARF KOREAN LILAC	7 GAL.	8
ER	ENKIANTHUS REDVEIN	3' TO 4'	2
GS	GLOBE BLUE SPRUCE	24" TO 30"	3
KD	KOUSA DOGWOOD	2" CAL.	7
M	MAGNOLIA	10' TO 12'	2
MK	MISS KIM LILAC	7 GAL.	7
PE	PRINCETON AMERICAN ELM	6' TO 7'	15
RC	RED HORSE CHESTNUT	2" CAL.	1
RR	RUBY FALLS REDBUD	2" CAL.	1
SG	SWEETGUM SLENDER	2" CAL.	3
SM	SUGAR MAPLE	3" CAL.	3
SO	SCARLET RED OAK	3" CAL.	1
SS	SERBIAN SPRUCE	7' TO 8'	1
WS	WEEPING GREEN SPRUCE	6' TO 7'	1
SHRUBS			
SYMBOL	PLANT NAME	SIZE	QUANTITY
AH	ANNABELLE HYDRANGIA	3 GAL.	4
BW	WINTER GEM BUXUS	3 GAL.	14
GRASSES			
SYMBOL	PLANT NAME	SIZE	QUANTITY
KF	KARL FOERSTER GRASS	2 GAL.	47
LS	LITTLE BLUESTEM GRASS	2 GAL.	23
PG	PAMPAS GRASS	3 GAL.	20
PERENNIALS			
SYMBOL	PLANT NAME	SIZE	QUANTITY
MM	MOUNTAIN MINT	1 GAL.	25
RM	ROSE MILKWEED	1 GAL.	23
WP	WHITE CREEPING PHLOX	1 GAL.	29

MULCHED AREAS (TYP.)

GRASS (PAID AS "RESTORATION OF LAWN AREAS").

BIRCH STREET

SPRUCE STREET

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TOWN of MANCHESTER CONNECTICUT SEAL

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PROJECT LOCATION
SPRUCE STREET MANCHESTER, CT

PROJECT TITLE
STREETSCAPE IMPROVEMENTS SPRUCE STREET AT NATHAN HALE SCHOOL

SHEET TITLE
POCKET PARK LANDSCAPING PLAN

SHEET NUMBER
12 of 22

MOVEMENT DIAGRAM

	NTOR	PHASE 1			PHASE 2			PHASE 3			PHASE 4			PHASE 5			PHASE 6			PHASE 7			PHASE 8					
	FLASH	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL
FACE #																												
INTERVALS	MIN GRN																											
	WALK																											
	PED CLR																											
	VEH EXT																											
	MAX 1																											
	MAX 2																											
	YELLOW																											
	RED																											
	ADD INIT																											
	MAX INIT																											
	TBR																											
	TTR																											
	MIN GAP																											
MODE																												
INIT START																												

NOTES:

TOWN TO MAINTAIN ALL SIGNS AND PAVEMENT MARKINGS.

(T) INSTALL BAR TYPE CROSSWALK (16" X 24" X 8') – TOWN MAINTAINED

SEE SEPARATE SITE DESIGN SHEET FOR RRFB PEDESTAL INSTALLATION LOCATIONS AND NON–TRAFFIC SIGNAL EQUIPMENT ITEMS.

SEE SEPARATE SIGNING & PAVEMENT MARKING SHEETS FOR ALL OTHER SIGNS AND PAVEMENT MARKINGS.

CONTRACTOR TO ERADICATE AND INSTALL PAVEMENT MARKINGS AS INDICATED BELOW:

- REVISE ALL PAVEMENT MARKINGS ASSOCIATED WITH THE CROSSWALK REVISIONS AS SHOWN.
- INSTALL BAR TYPE CROSSWALKS (24" – 16" x 8' MIN.)
- ERADICATE ANY CONFLICTING PAVEMENT MARKINGS.

TECHNICAL NOTES

RECTANGULAR RAPID FLASHERS TO FLASH FOR 15 SECONDS UPON ACTUATION. (8 - 17 SECONDS ADJUSTABLE).
15 SECOND TIMER SHOULD RESET UPON EACH ACTUATION.
FLORENCE ST CROSSING RRFB AND NATHAN HALE GREENWAY CROSSING RRFB PAIRS TO ACTUATE INDEPENDENTLY

OFFICE RECORD

REV # TIR # SM # SIGNAL REVISED:
INSTALLED RECTANGULAR RAPID FLASHING BEACON (RRFB) TYPE B (DOUBLE SIDED ASSEMBLIES) AT FLORENCE STREET (EAST SIDE RESOURCE CENTER) CROSSING AND AT NATHAN HALE GREENWAY (#160-163 MID-BLOCK CROSSWALK) UNDER PROJECT 2023111 (ASSOCIATED WITH EAST SIDE PCOKET PARK.)

RECTANGULAR RAPID FLASHING BEACON (RRFB) CONSRUCTION NOTES:

ALL TRAFFIC EQUIPMENT IS NEW.

ALL TRAFFIC EQUIPMENT TO BE POWDER COATED BLACK PER SPECIFICATION.

STAKE ALL RIGHT OF WAY PRIOR TO EXCAVATION.

SEE ~~SPECIAL PROVISION ITEM #1117111–A~~ SPECIFICATIONS – RECTANGULAR RAPID FLASHING BEACON–TYPE A.
SEE ~~SPECIAL PROVISION ITEM #1117111–A~~ SPECIFICATIONS – RECTANGULAR RAPID FLASHING BEACON–TYPE B.

RRFB TYPES:
TYPE A – SINGLE SIDED FLASHER AND SINGLE SIDED SIGNS. TO BE INSTALLED FACING ONCOMING TRAFFIC.
TYPE B – DOUBLE SIDED FLASHER AND BACK–TO–BACK MOUNTED SIGNS.

ALL RRFB TYPES TO BE EQUIPPED WITH CROSSWALK ILLUMINATOR. TAPCO SAFEWALK OR APPROVED EQUAL AT ALL RRFB LOCATIONS. FINAL PLACEMENT TO BE INSTALLED AS DIRECTED BY THE MANUFACTURER'S REPRESENTATIVE. LIGHTS TO ACTUATE DUSK TO DAWN IN UNISON WITH SYSTEM ACTIVATION.

RECTANGULAR RAPID FLASHING BEACON TO BE PEDESTRIAN ACTUATED, SOLAR POWERED AND WIRELESS ACTIVATED.

INSTALL RRFB ASSEMBLIES ON 14' PEDESTALS.

ANY PROPOSED REVISIONS TO THE LOCATION OF THE APPURTENANCES AND/OR SIGNS SHOWN ON THE PLAN MUST BE SUBMITTED FOR REVIEW AND APPROVAL BY THE ENGINEER, PRIOR TO INSTALLATION.

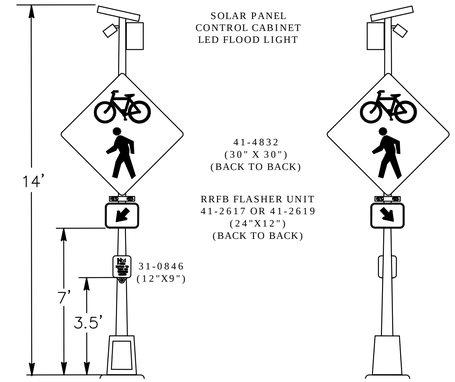
CONTRACTOR TO VERIFY LOCATION OF PEDESTAL FOUNDATIONS AND LOCATIONS OF UNDERGROUND UTILITIES PRIOR TO INSTALLING PEDESTAL FOUNDATIONS.

INSTALL PEDESTAL FOUNDATIONS ADJACENT TO THE LANDING AREAS. CONTRACTOR TO ENSURE MINIMUM 48" ADA CLEAR PATH IS PROVIDED ADJACENT TO AND AROUND PEDESTAL FOUNDATIONS. IF A MINIMUM 48" FREE PATH IS UNAVAILABLE, NOTIFY THE ENGINEER BEFORE PROCEEDING.

REMOVE ALL ABANDONED TRAFFIC SIGNAL EQUIPMENT PER SPECIAL PROVISIONS.

SIGN LEGEND

(A) INSTALL RECTANGULAR RAPID FLASHING BEACON ASSEMBLY TYPE B (TOWN OWNED AND MAINTAINED)



RRFB ASSEMBLY TYPE B
DETAILS NOT TO SCALE

(B) INSTALL RECTANGULAR RAPID FLASHING BEACON ASSEMBLY TYPE B (TOWN OWNED AND MAINTAINED)

RRFB ASSEMBLY TYPE B
DETAILS NOT TO SCALE

REMOVE EXISTING (C) AND INSTALL NEW (TOWN FURNISHED) AT LOCATION (C)
41–2112 SCHOOL ZONE (S1–1; 36"X36")
41–6126 "AHEAD" PLAQUE (W16–9P; 24"X12")

(D) INSTALL (TOWN FURNISHED)
41–4828 BICYCLE/PEDESTRIAN (W11–15; 30"X30")
41–6126 "AHEAD" PLAQUE (W16–9P; 24"X12")

CONCRETE SIDEWALK LANDING AREA
SIZE: MIN 5'X5'
PAY ITEM: CONCRETE SIDEWALK
TYPICAL CROSS–SLOPE: 1.5%
MAXIMUM CROSS–SLOPE: 2% ALL DIRECTIONS
NOTE: MINIMUM ADA SPACE REQUIRED TO SAFELY CHANGE DIRECTIONS USING WHEELCHAIR OR SIMILAR MOBILITY DEVICE.

CONCRETE SIDEWALK RAMP DETECTABLE WARNING TILE
SIZE: MIN RAMP WIDTH X 2'
PAY ITEM: DETECTABLE WARNING STRIP (TOWN PROVIDED)

RRFB LEGEND (NTS):
PEDESTAL MOUNTED SIGN(S)
PEDESTAL FOUNDATION & MOUNTING
PEDESTRIAN PUSH BUTTON & SIGN
DIRECTIONAL ARW. FOR PUSH BUTTON
TYPE A RRFB (SINGLE SIDED)
TYPE B RRFB (BACK-TO-BACK)

APPROVED
PLANNING AND ZONING COMMISSION
MANCHESTER, CT
DATE: _____
SIGNED: _____

	TRAFFIC DESIGN	ELECTRICAL DESIGN
ENGINEER	JOHN E. DIBIASI	N/A
DRAWN BY	JOHN E. DIBIASI	N/A
CHECKED BY	JEFF LAMALVA	N/A
SUBMITTED BY	JOHN E. DIBIASI	N/A
APPROVED BY	JEFF LAMALVA	N/A
APPROVED DATE	11/8/2024	__/__/__

REV # N/A INTERSECTION # 076-___

ENERGY BY SOLAR | ADDRESS #153-163 SPRUCE ST
MAINT LEVEL: N/A | SERVICE POLE: SOLAR
UNMETERED SERVICE

NO.	DATE	REVISION DESCRIPTION
–	_____	_____
–	_____	_____
–	_____	_____
–	_____	_____
–	_____	_____
–	_____	_____
-	11/8/24	*BID PLAN*

LEGEND:
R, Y, G RED, YEL, GRN
RED ARROW
YELLOW ARROW
GREEN ARROW
W WALK/ PED. CLR
D.W. DON'T WALK
FL. FLASHING

PROPOSED WOOD SPAN POLE
EXISTING WOOD SPAN POLE
PROPOSED STEEL SPAN POLE
EXISTING STEEL SPAN POLE
PROPOSED UTILITY POLE
EXISTING UTILITY POLE
PEDESTAL MOUNTING
PEDESTRIAN PUSH BUTTON & SIGN
DIRECTIONAL ARW. FOR PUSH BUTTON

TRAFFIC SIGNAL FACE
PEDESTRIAN SIGNAL FACE
DET. LEADS IN SAW CUT
PROPOSED RMC (RIGID METAL CONDUIT)
EXISTING RMC (RIGID METAL CONDUIT)
AUXILIARY TERMINATION CABINET
AUXILIARY EQUIPMENT CABINET
VIDEO DETECTION ZONE

PROPOSED CONTROLLER
EXISTING CONTROLLER
LOOP DETECTOR
SD SYSTEM DETECTOR
MAGNETIC DETECTOR
OPTICAL DETECTOR
VIDEO DETECTOR
AUDIO DETECTOR

VC VIDEO CAMERA CABLE
CABLE CLOSURE
WIRELESS SENSOR
WIRELESS RECEIVER
WIRELESS TRANSCEIVER
GUY WIRE
PROPOSED HANDHOLE
EXISTING HANDHOLE

DATE PLOTTED : R:\Project\Public Works\2023111 - East Side Pocket Park-Nathan Hale Improvements\Proj\2023111-RRFB.dwg, 11/12/2024 10:34:23 AM, jdibiasi

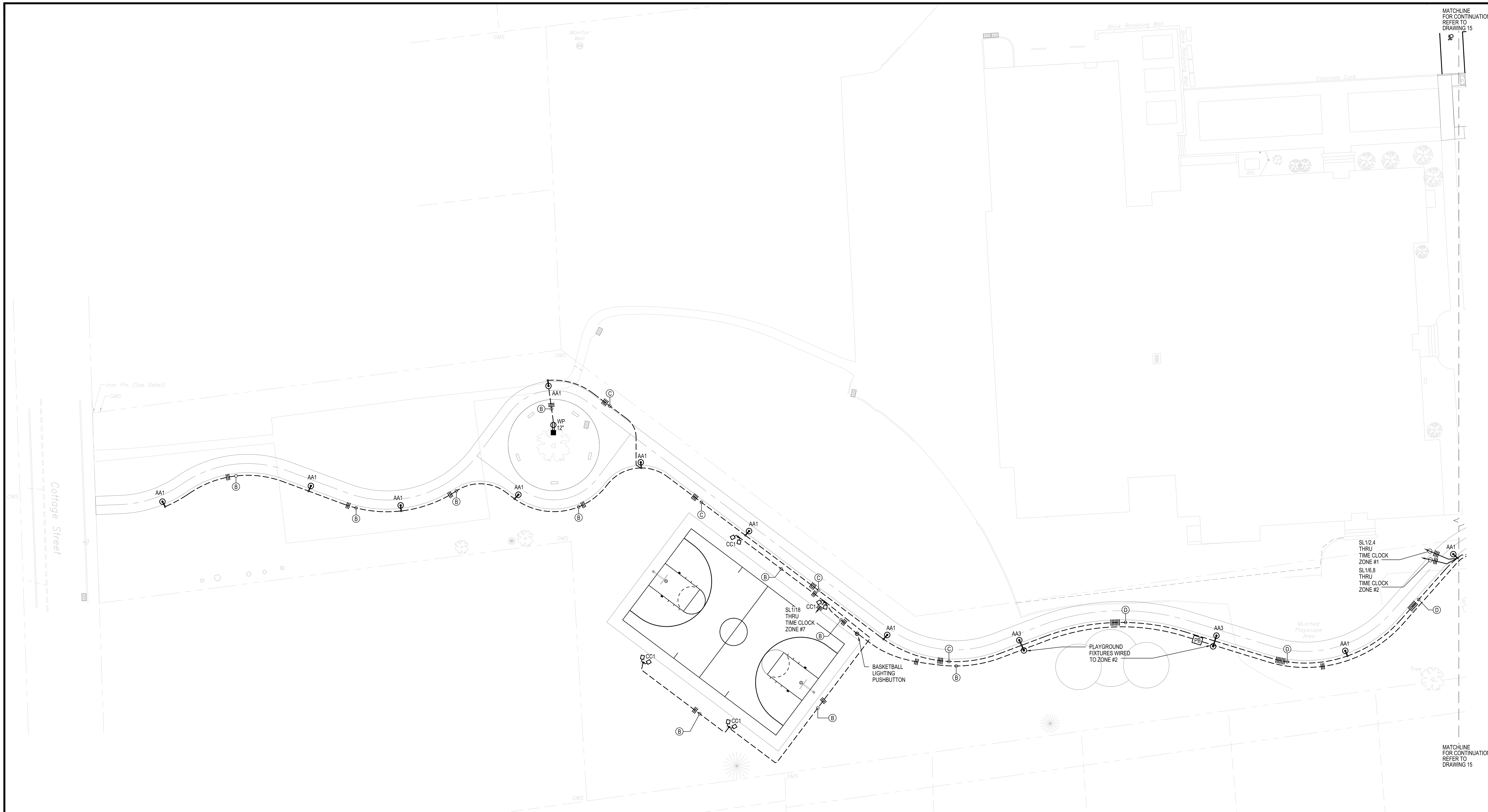
STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

SCALE 1" = 20'

SPRUCE STREET
AT FLORENCE STREET CROSSING
&
AT NATHAN HALE GREENWAY CROSSING

TOWN: TOWN OF MANCHESTER
DRAWING TITLE: TRAFFIC CONTROL SIGNAL PLAN

PROJECT NO. 2023111
DRAWING NO. TCS-01
SHEET NO. 13 OF 22



SITE LIGHTING PLAN PART A

SCALE: 1"=20'-0"

APPROVED
PLANNING AND ZONING COMMISSION
MANCHESTER, CT

DATE: ____________________

SIGNED: ____________________

BRANCH CIRCUIT WIRING SCHEDULE

SYMBOL	BRANCH CIRCUIT WIRING SIZE
A	2 X #6 THWN-2 AND 1 X #6 THWN-2 GND. IN 2" C.
B	2 X #3 THWN-2 AND 1 X #3 THWN-2 GND. IN 2" C.
C	3 X #3 THWN-2 AND 1 X #3 THWN-2 GND. IN 2" C.
D	5 X #3 THWN-2 AND 2 X #3 THWN-2 GND. IN (2) 2" C.
E	6 X #3 THWN-2 AND 3 X #3 THWN-2 GND. IN (3) 2" C.

REVISIONS

STREETSCAPE IMPROVEMENTS SPRUCE STREET AT NATHAN HALE

SPRUCE STREET, MANCHESTER CONNECTICUT

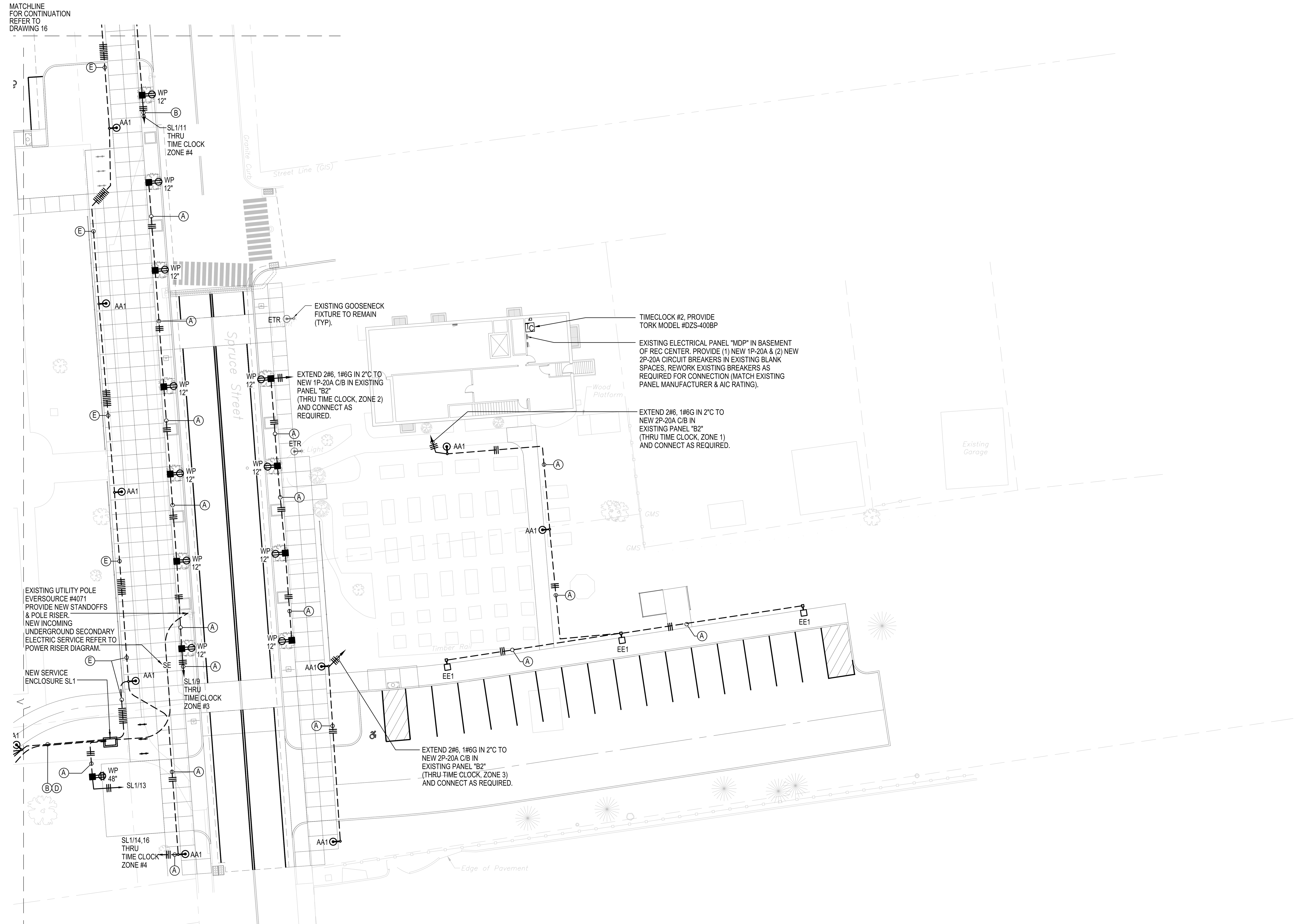
BEMIS ASSOCIATES, L.L.C.
Consulting Engineers
185 Main Street
Farmington, Ct 06032
(860) 667-3233
Fax: (860) 321-7070
w.w.w.bemisassociates.com

TITLE
ELECTRICAL SITE LIGHTING PLAN

DATE:
NOVEMBER 8, 2024

DWG. NO.

MATCHLINE
FOR CONTINUATION
REFER TO
DRAWING 14



SITE LIGHTING PLAN PART B

SCALE: 1"=20'-0"

MATCHLINE
FOR CONTINUATION
REFER TO
DRAWING 14

BRANCH CIRCUIT WIRING SCHEDULE

SYMBOL	BRANCH CIRCUIT WIRING SIZE
A	2 X #6 THWN-2 AND 1 X #6 THWN-2 GND. IN 2" C.
B	2 X #3 THWN-2 AND 1 X #3 THWN-2 GND. IN 2" C.
C	3 X #3 THWN-2 AND 1 X #3 THWN-2 GND. IN 2" C.
D	5 X #3 THWN-2 AND 2 X #3 THWN-2 GND. IN (2) 2" C.
E	6 X #3 THWN-2 AND 3 X #3 THWN-2 GND. IN (3) 2" C.

APPROVED
PLANNING AND ZONING COMMISSION
MANCHESTER, CT

DATE: ____________________

SIGNED: ____________________

REVISIONS

STREETSCAPE IMPROVEMENTS SPRUCE STREET AT NATHAN HALE
SPRUCE STREET, MANCHESTER CONNECTICUT

BEMIS ASSOCIATES, L.L.C.
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165 Main Street
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TITLE
ELECTRICAL SITE LIGHTING PLAN

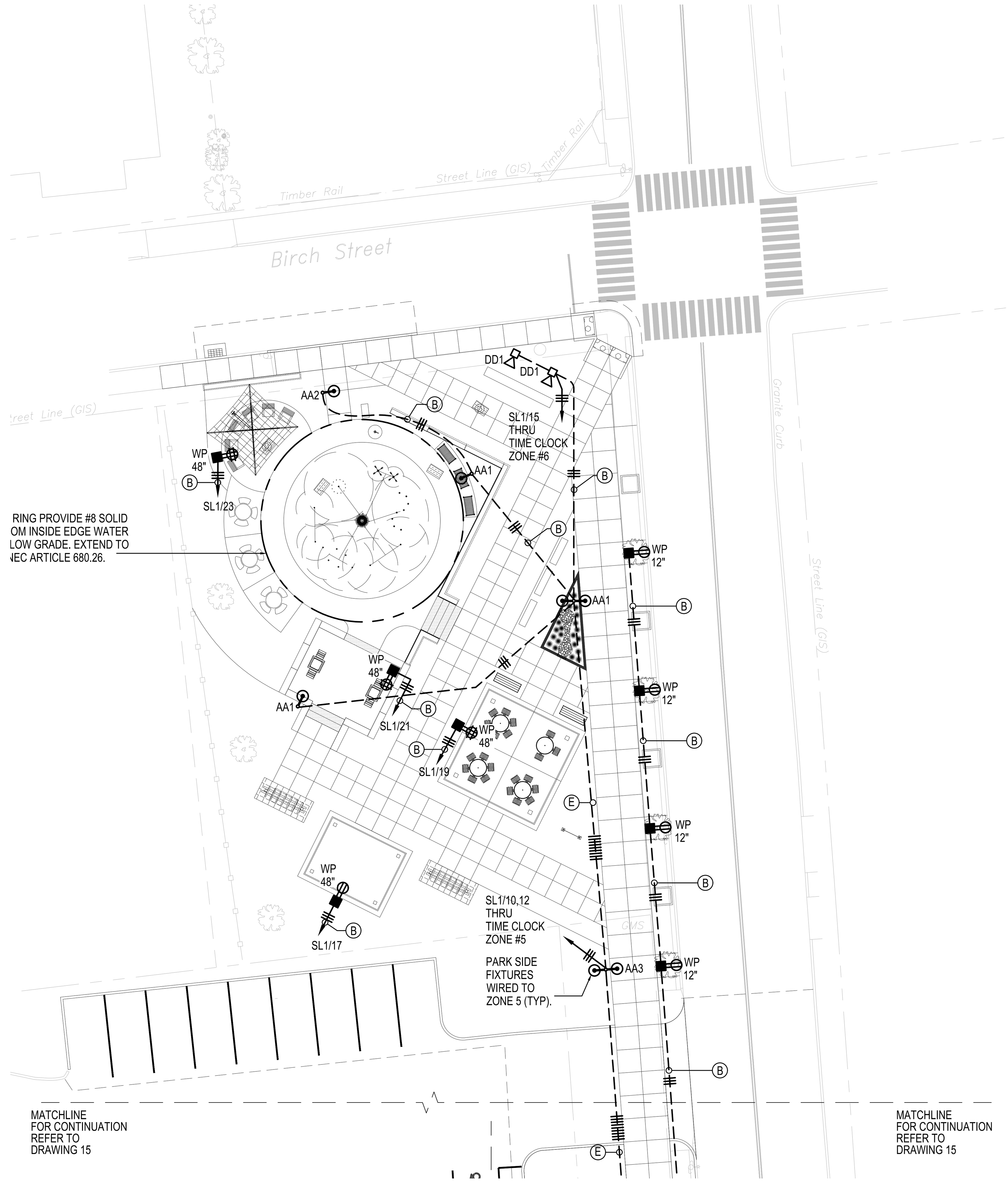
DATE:
NOVEMBER 8, 2024

DWG. NO.
15 of 22

REVISIONS

STREETSCAPE IMPROVEMENTS SPRUCE STREET AT NATHAN HALE

SPRUCE STREET, MANCHESTER CONNECTICUT



SITE LIGHTING PLAN PART C

SCALE: 1"=20'-0"

APPROVED
PLANNING AND ZONING COMMISSION
MANCHESTER, CT

DATE: ____________________

SIGNED: ____________________

BRANCH CIRCUIT WIRING SCHEDULE

SYMBOL	BRANCH CIRCUIT WIRING SIZE
A	2 X #6 THWN-2 AND 1 X #6 THWN-2 GND. IN 2" C.
B	2 X #3 THWN-2 AND 1 X #3 THWN-2 GND. IN 2" C.
C	3 X #3 THWN-2 AND 1 X #3 THWN-2 GND. IN 2" C.
D	5 X #3 THWN-2 AND 2 X #3 THWN-2 GND. IN (2) 2" C.
E	6 X #3 THWN-2 AND 3 X #3 THWN-2 GND. IN (3) 2" C.

BEMIS ASSOCIATES, L.L.C.
Consulting Engineers

TITLE
ELECTRICAL SITE LIGHTING PLAN

DATE:
NOVEMBER 8, 2024

DWG. NO.
16 of 22

GENERAL NOTES

1 - THE CONTRACTOR SHALL FIELD VERIFY AND OBTAIN ALL NECESSARY DIMENSIONS TO COORDINATE WORK TO BE DONE.

2 - FINISHED WORK: THE INTENT OF THE SPECIFICATIONS AND DRAWINGS IS TO CALL FOR FINISHED WORK, COMPLETED, TESTED AND READY FOR OPERATION.

3 - GOOD PRACTICE: IT IS NOT INTENDED THAT THE DRAWINGS SHOW EVERY CONDUIT, JUNCTION BOX, FITTING OR MINOR DETAIL AND IT IS UNDERSTOOD THAT WHILE THE DRAWINGS MUST BE FOLLOWED AS CLOSELY AS CIRCUMSTANCES WILL PERMIT, THE SYSTEMS SHALL BE INSTALLED ACCORDING TO THE INTENT AND MEANING OF THE CONTRACT DOCUMENTS AND IN ACCORDANCE WITH GOOD PRACTICE.

4 - ANY APPARATUS, APPLIANCE, MATERIAL OR WORK NOT SHOWN ON DRAWINGS BUT MENTIONED IN SPECIFICATIONS OR VICE VERSA, OR ANY INCIDENTAL ACCESSORIES NECESSARY TO MAKE THE WORK COMPLETE AND PERFECT IN ALL RESPECTS AND READY FOR OPERATION, EVEN IF NOT PARTICULARLY SPECIFIED, SHALL BE FURNISHED AND INSTALLED BY CONTRACTOR AT NO ADDITIONAL COST TO OWNER.

5 - CODES AND STANDARDS - COMPLY WITH ALL FEDERAL, STATE AND LOCAL CODES AND STANDARDS WHEREVER APPLICABLE INCLUDING THE FOLLOWING: 2022 AMENDMENT TO THE 2022 CONNECTICUT STATE BUILDING CODE SUPPLEMENT, 2022 INTERNATIONAL BUILDING CODE, 2020 NATIONAL ELECTRICAL CODE, ILLUMINATING ENGINEERING SOCIETY LIGHTING HANDBOOK, UNDERWRITERS LABORATORIES, NEMA STANDARDS.

6 - NOTE THAT THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF THE ELECTRICAL EQUIPMENT AND SYSTEMS, WITHOUT SHOWING EVERY DETAIL AND FITTING.

7 - THE NUMBER OF WIRES ON A CONDUIT RUN IS INDICATED ON THE DRAWINGS BY CROSS LINES ON THE CONDUITRUNS. PROVIDE CODE-SIZED CONDUIT FOR THE NUMBER AND SIZE OF WIRES UNLESS A LARGER SIZE IS SHOWN ON THE DRAWINGS. MINIMUM CONDUIT SIZE SHALL BE 3/4".

8 - BRANCH CIRCUIT WIRING AND ARRANGEMENT OF HOME RUNS HAS BEEN DESIGNED FOR MAXIMUM ECONOMY CONSISTENT WITH ADEQUATE SIZING FOR VOLTAGE DROPS, CIRCUIT AMPACITIES, AND OTHER CONSIDERATIONS. INSTALL THE WIRING WITH CIRCUITS ARRANGED AS SHOWN ON THE DRAWINGS, EXCEPT AS APPROVED IN ADVANCE BY THE ARCHITECT AND ENGINEER. DO NOT MAKE CHANGES WITHOUT PRIOR APPROVAL.

9 - PROVIDE A SEPARATE NEUTRAL CONDUCTOR FOR EACH 120V AND 208V SINGLE PHASE CIRCUIT. DO NOT USE A COMMON NEUTRAL FOR GROUPS OF CIRCUITS. PROVIDE A SEPARATE GROUND WIRE FOR EACH CIRCUIT BACK TO THE RESPECTIVE PANEL GROUND. IF MORE THAN 3 CURRENT CARRYING CONDUCTORS ARE INSTALLED IN ONE CONDUIT THEY SHALL BE DERATED IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE. DO NOT INSTALL MORE THAN THREE 30 AMP SINGLE PHASE OR FOUR 20 AMP SINGLE PHASE CIRCUITS IN THE SAME CONDUIT. PROVIDE A DEDICATED CONDUIT FOR EACH 3-PHASE CIRCUIT. DO NOT MIX LIGHTING AND POWER CIRCUITS IN THE SAME CONDUIT.

DRAWING LEGEND

SYMBOL	DESCRIPTION
	FULL CUTOFF DECORATIVE LED GOOSENECK LIGHTING FIXTURE MOUNTED ON 12' ORNAMENTAL STEEL POLE WITH BANNER ARM. SUBLETTER INDICATES TYPE.
	DUAL HEAD FULL CUTOFF DECORATIVE LED GOOSENECK LIGHTING FIXTURE MOUNTED ON 12' ORNAMENTAL STEEL POLE WITH BANNER ARM. SUBLETTER INDICATES TYPE.
	DUAL HEAD ADJUSTABLE LED BASKETBALL COURT LIGHTING FIXTURE.
	FULL CUTOFF LED SHOEBOX LIGHTING FIXTURE MOUNTED ON 20' SQUARE STEEL POLE.
	LED SIGN LIGHT WITH SHROUD
	GFCI TYPE DUPLEX RECEPTACLE MOUNTED IN 12" PEDOC POWER PEDESTAL.
	GFCI TYPE QUAD RECEPTACLE MOUNTED IN 48" PEDOC POWER PEDESTAL.
TC	TIME CLOCK
PB	FLUSH PULLBOX, SIZED PER NEC.
	SITE ELECTRICAL ENCLOSURE WITH PAD (SEE DETAIL).
	BASKETBALL COURT PEDESTAL PUSH-BUTTON (SEE DETAIL).
	UNDERGROUND CONDUIT
— — —SE— — —	INCOMING UNDERGROUND SECONDARY ELECTRIC SERVICE.
	BRANCH CIRCUIT WIRING. CROSS LINES INDICATE NUMBER OF CONDUCTORS.
	BRANCH CIRCUIT HOMERUN IN CONDUIT. CROSS LINES INDICATE NUMBER OF CONDUCTORS.

ABBREVIATION	DESCRIPTION
A	AMPS.
AFF	ABOVE FINISHED FLOOR.
C	CONDUIT.
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND.
NTS	NOT TO SCALE.
RMC	RIGID METAL CONDUIT
V	VOLTS.

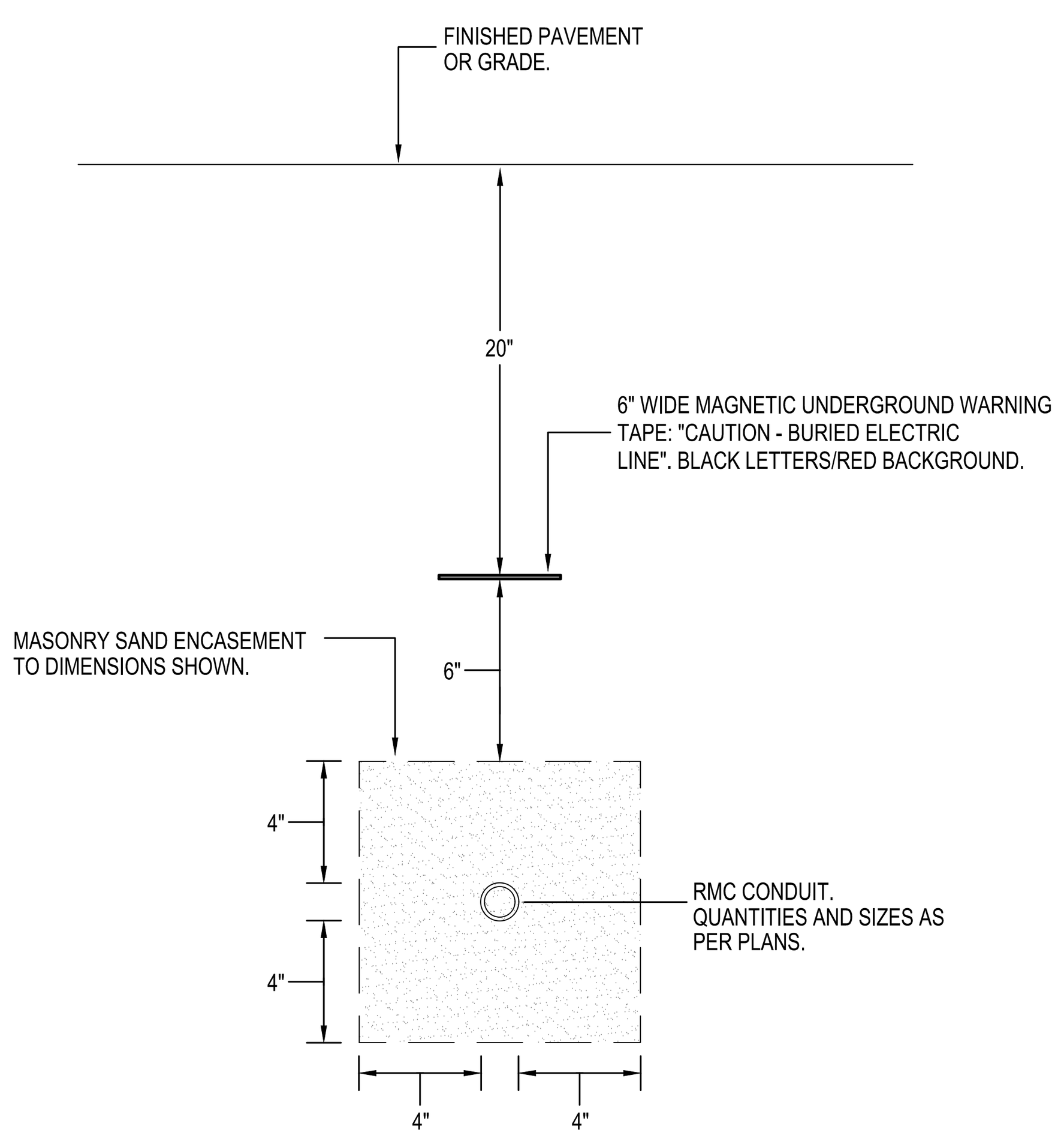
LIGHT FIXTURE SCHEDULE

TYPE	DESCRIPTION, MANUFACTURE, AND MODEL #	LAMP	FIXTURE WATTS	REMARKS
AA1	ORNAMENTAL GOOSENECK LED LIGHTING FIXTURE WITH INTEGRAL HOUSE SIDE SHIELD MOUNTED ON 12' DECORATIVE POLE LUMEC #DOS-24W16LED-4K-G3-LE2F-UNV-HS-SP2-DMG-YM-BKTX MOUNTING ARM LUMEC #DOS-DBB POLE LUMEC #SM6-N-12-BA-BKTX	INCLUDED LED 4,000K CCT, 70 CRI 2,523 LUMENS	29	REFER TO DETAILS ON DRAWING 24
AA2	ORNAMENTAL GOOSENECK LED LIGHTING FIXTURE OPTIC ROTATED 90° WITH INTEGRAL HOUSE SIDE SHIELD MOUNTED ON 12' DECORATIVE POLE LUMEC #DOS-24W16LED-4K-G3-LE3F-HS-SP2-DMG-YM-BKTX MOUNTING ARM LUMEC #DOS-DBB POLE LUMEC #SM6-N-12-BA-BKTX	INCLUDED LED 4,000K CCT, 70 CRI 2,496 LUMENS	29	REFER TO DETAILS ON DRAWING 24
AA3	BACK TO BACK ORNAMENTAL GOOSENECK LED LIGHTING FIXTURES WITH INTEGRAL HOUSE SIDE SHIELD MOUNTED ON 12' DECORATIVE POLE LUMEC 2X #DOS-24W16LED-4K-G3-LE2F-HS-SP2-DMG-YM-BKTX MOUNTING ARM LUMEC DOS-DBB-2 POLE LUMEC #SM6-N-12-BA-BKTX	INCLUDED LED 4,000K CCT, 70 CRI 5,046 LUMENS	58	REFER TO DETAILS ON DRAWING 24
CC1	TWO (2) 22"W X 4"H X 35.3" EXTENSION HIGH OUTPUT AREA LUMINAIRES, EACH WITH DIE-CAST ALUMINUM HOUSING (BLACK FINISH), WEATHERTIGHT LED DRIVER COMPARTMENT, HIGH-PERFORMANCE HEAT SINK, ADJUSTABLE ARM MOUNT, ASYMMETRIC TYPE IV MEDIUM OPTICS, 0-10V DIMMING LED DRIVER (120V), ANSI C136-41 7-PIN RECEPTACLE, AND TWIST LOCK LIGHTING CONTROLLER. PROVIDE WITH 20' HIGH, 5" SHAFT STRAIGHT SQUARE STEEL POLE WITH 180° STEEL BRACKET MOUNT. (2) CREE #OSQL-C-40L-50K7-4M-UL-NM-BK-20KV-R EACH WITH ADJUSTABLE ARM MOUNT #OSQ-HO-AA, AND TWIST LOCK LIGHTING CONTROLLER #TL7-B2. PROVIDE WITH POLE #SSS-5-7-20-CW-BS-OT-N-BK, STEEL BRACKET #PB-2A5BK, AND ANCHOR BOLTS #SSS-5-AB-1-36.	INCLUDED LED 5,000K CCT, 70 CRI 3,356 LUMENS	472	REFER TO DETAILS ON DRAWING 24
DD1	GROUND MOUNTED SIGN LIGHT WITH DIE-CAST ALUMINUM HOUSING, GASKETED CAST ALUMINUM SHROUD, FROSTED LENS, BLACK FINISH HADCO #WAM1D-F-G2-B	INCLUDED LED 4,000K CCT, 70 CRI 760 LUMENS	10.6	REFER TO DETAILS ON DRAWING 24
EE1	23 3/8"L X 15"W X 4 1/2"H POLE MOUNT AREA LIGHT WITH DIE-CAST ALUMINUM HOUSING, POLYCARBONATE LENS, VACUUM-METALIZED SPECULAR REFLECTOR, HIGH TEMPERATURE SILICONE GASKETING, TYPE 3 DISTRIBUTION, FIXED OUTPUT LED DRIVER (208V), AND HIGH DURABILITY BRONZE FINISH. RAB #ALED-3T-150-208V.	INCLUDED LED 5,000K CCT, 70 CRI 10,157 LUMENS	78	REFER TO DETAILS ON DRAWING 24

PANEL #SL1 - CUTLER-HAMMER PANELBOARD PRL3A, SURFACE,
120/240V, 1-PHASE, 3 WIRE, 200 AMP MAIN C/B, 65K A.I.C. MIN.

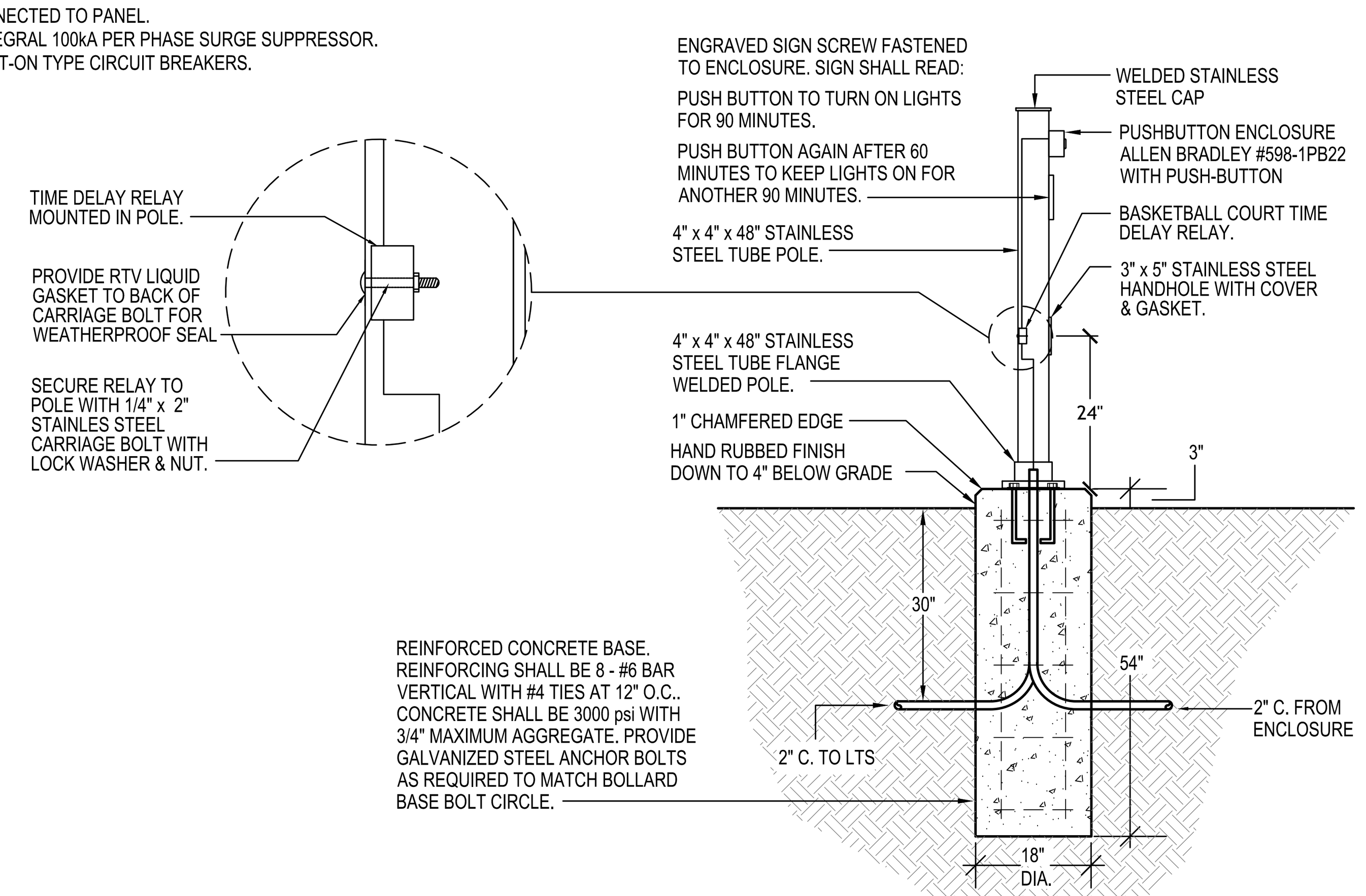
CKT	TRIP	POLE	REMARKS	CKT	TRIP	POLE	REMARKS
1	20	1	CONTACTOR COIL	2	20	2	PATHWAY LIGHTING
3	20	1	PANEL RECEPTACLE	4			
5	20	1	ENCLOSURE HEATER	6	20	2	PLAY GROUND LIGHTING
7	20	1	ENCLOSURE LIGHT	8			
9	20	1	TREE LIGHT REC	10	20	2	POCKET PARK LIGHTING
11	20	1	TREE LIGHT REC	12			
13	20	1	BOLLARD REC	14	20	2	SIDEWALK LIGHTING
15	20	1	SIGN LIGHTS	16			
17	20	1	POCKET PARK REC	18	20	1	BASKETBALL COURT LTS
19	20	1	POCKET PARK REC	20	20	1	SPARE
21	20	1	POCKET PARK REC	22	20	1	SPARE
23	20	1	POCKET PARK REC	24	20	1	SPARE
25	20	1	SPARE	26	20	1	SPARE
27	-	-	BLANK FOR FUTURE USE	28	-	-	BLANK FOR FUTURE USE
29	-	-	BLANK FOR FUTURE USE	30	-	-	BLANK FOR FUTURE USE
31	-	-	BLANK FOR FUTURE USE	32	-	-	BLANK FOR FUTURE USE
33	-	-	BLANK FOR FUTURE USE	34	-	-	BLANK FOR FUTURE USE
35	-	-	BLANK FOR FUTURE USE	36	-	-	BLANK FOR FUTURE USE
37	-	-	BLANK FOR FUTURE USE	38	-	-	BLANK FOR FUTURE USE
39	-	-	BLANK FOR FUTURE USE	40	-	-	BLANK FOR FUTURE USE

NOTES:
1) PROVIDE WITH SILVER PLATE COPPER BUS BARS AND COPPER GROUND BAR.
2) PROVIDE WITH BLACK FACE, WHITE CORE ENGRAVED NAMEPLATE.
3) PROVIDE WITH TYPE WRITTEN CIRCUIT DIRECTORY REPRESENTING CIRCUITS AS ACTUALLY CONNECTED TO PANEL.
4) PROVIDE WITH INTEGRAL 100kA PER PHASE SURGE SUPPRESSOR.
5) PROVIDE WITH BOLT-ON TYPE CIRCUIT BREAKERS.



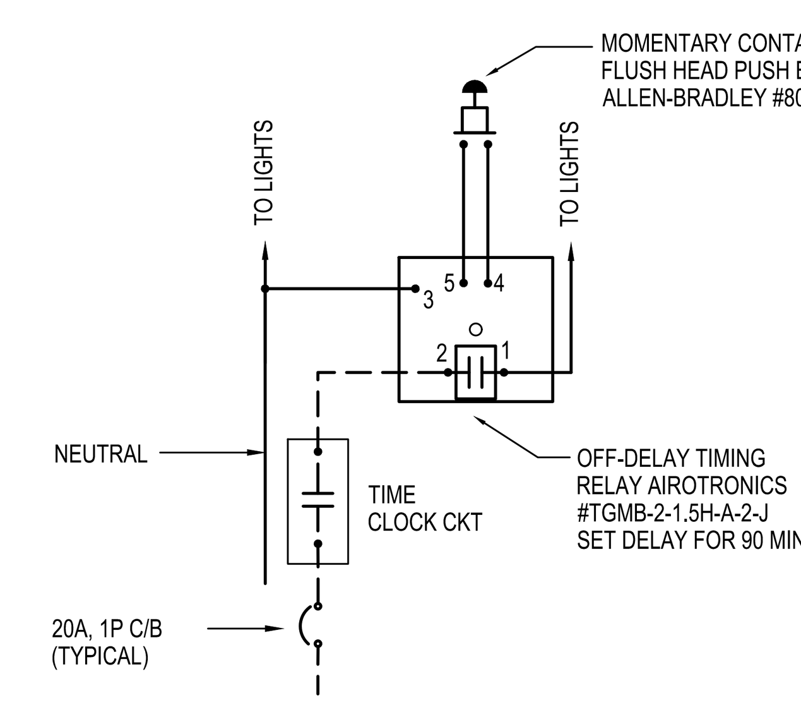
UNDERGROUND CONDUIT DETAIL

NTS



BASKETBALL COURT PUSHBUTTON DETAIL

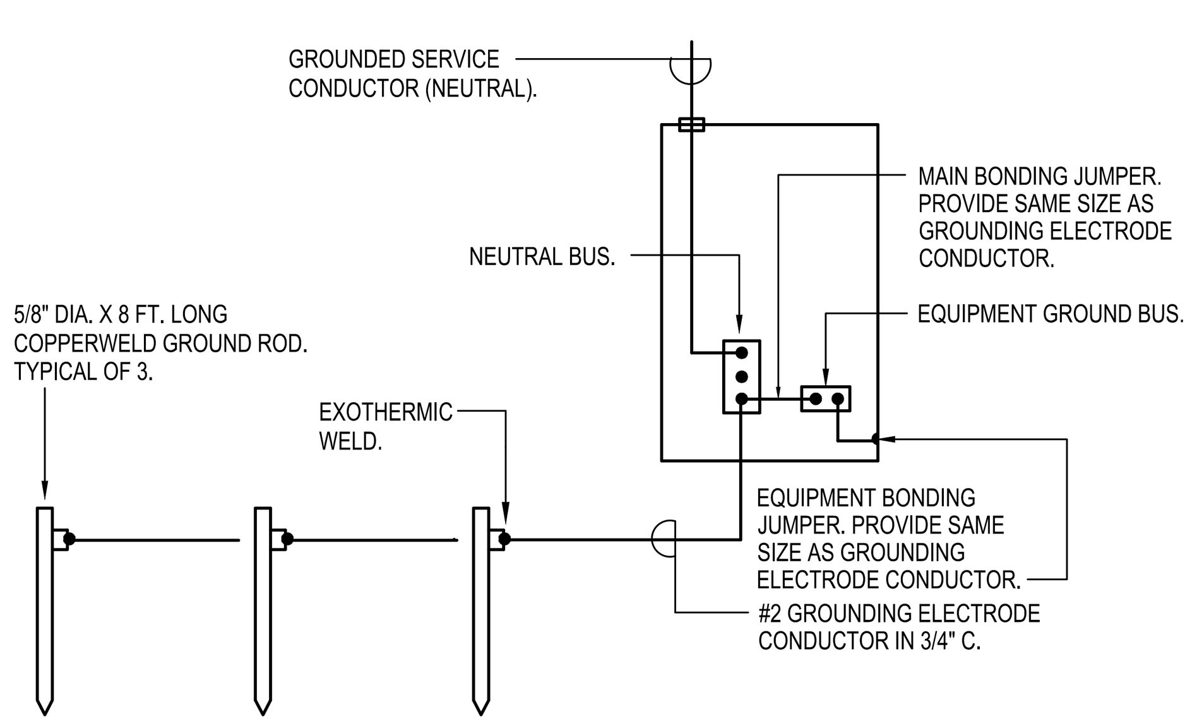
NTS



SEQUENCE OF OPERATION
1. TIME CLOCK SHALL ENABLE MANUAL CONTROL OF LIGHTING BETWEEN THE HOURS OF 4PM AND 10PM.
2. OPERATION OF MUSHROOM SWITCH SHALL ACTIVATE LIGHTS AND ALLOW LIGHTS TO REMAIN 'ON' FOR 90 MIN. AT WHICH TIME THE LIGHTS SHALL AUTOMATICALLY TURN OFF.
3. IF THE MUSHROOM SWITCH IS PUSHED ANY TIME AFTER THE LIGHTS HAVE BEEN ON FOR 60 MIN., THE TIME DELAY SHALL RESET FOR ANOTHER 90 MIN.

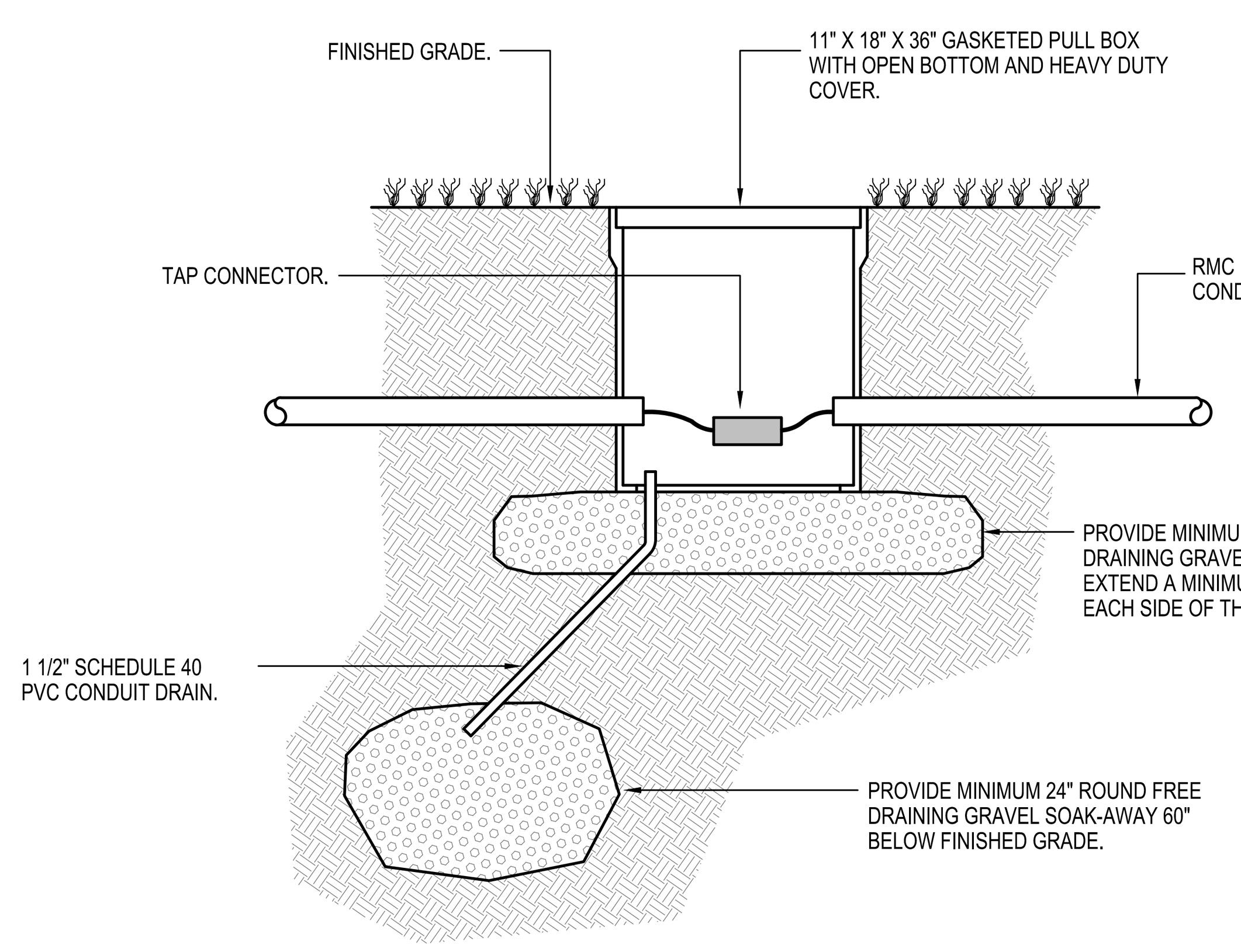
BASKETBALL COURT LIGHTING CONTROL SCHEMATIC

NTS



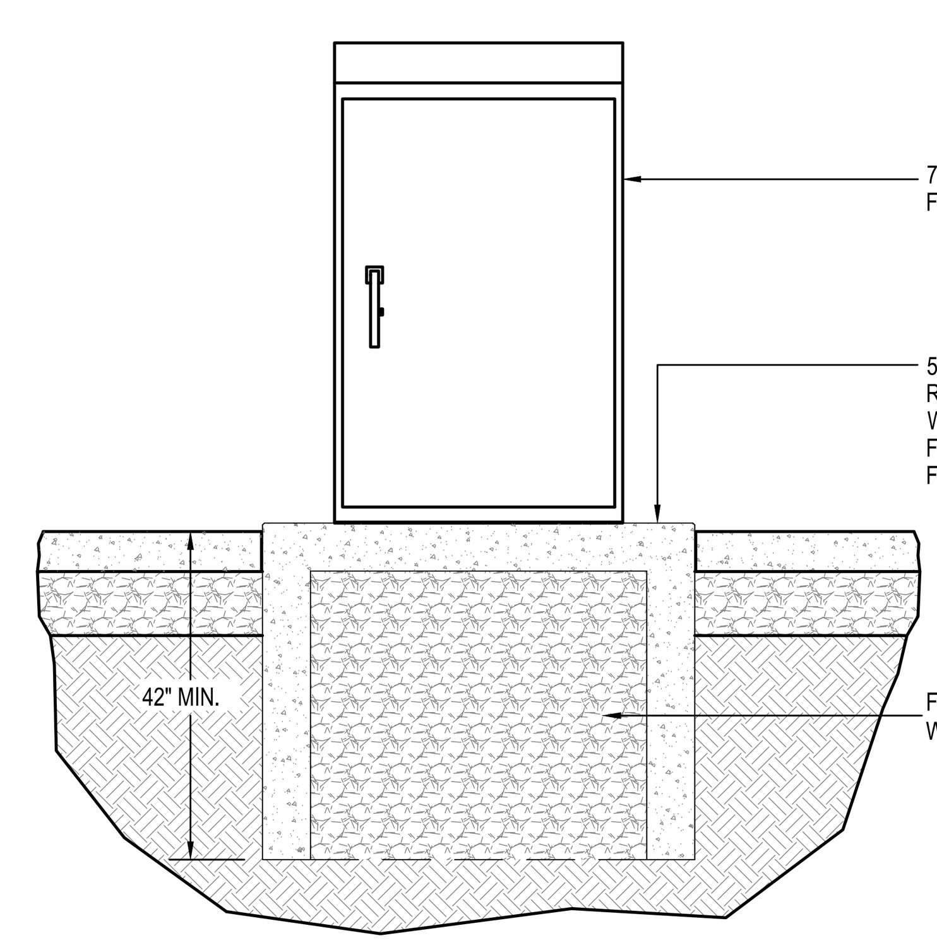
GROUNDING ELECTRODE SYSTEM SCHEMATIC

NTS



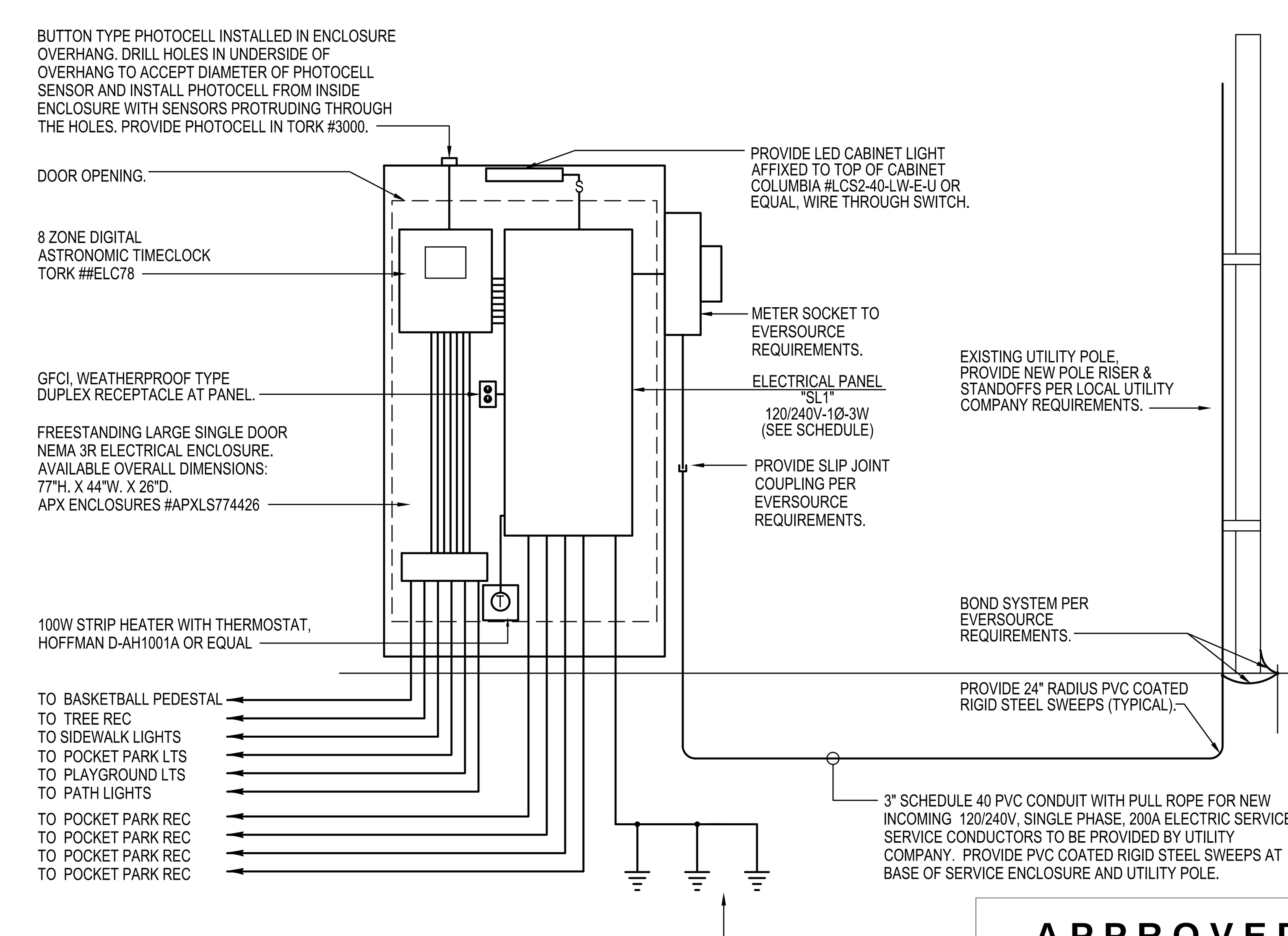
PULL BOX DETAIL

NTS



FREESTANDING ENCLOSURE ELEVATION

NTS



POWER RISER DIAGRAM - SERVICE ENCLOSURE

NTS

APPROVED
PLANNING AND ZONING COMMISSION
MANCHESTER, CT
DATE: ____________
SIGNED: ____________

REVISIONS

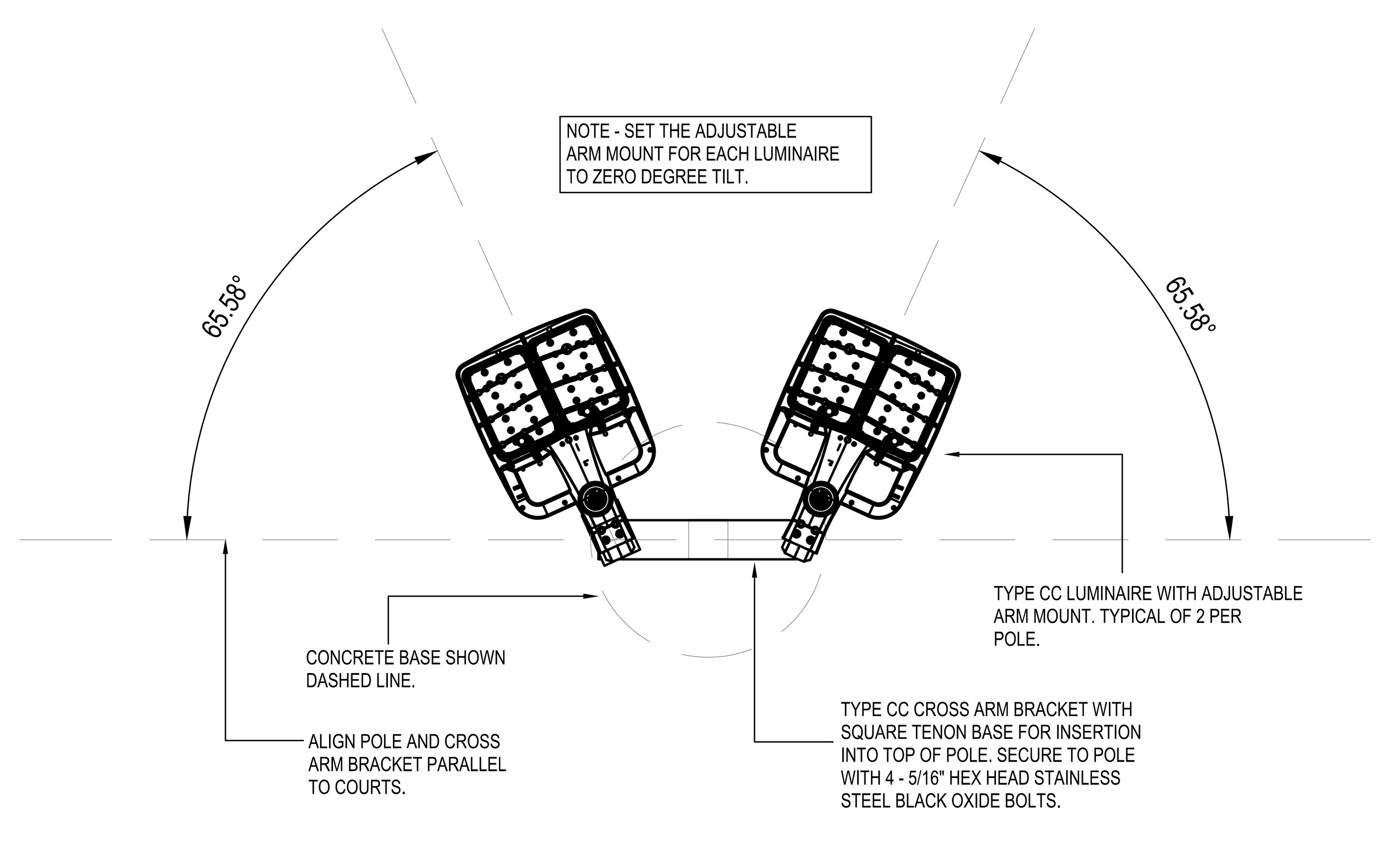
STREETSCAPE IMPROVEMENTS SPRUCE STREET AT NATHAN HALE
SPRUCE STREET, MANCHESTER CONNECTICUT

BEMIS ASSOCIATES, L.L.C.
Consulting Engineers
165 Main Street
Farmington, CT 06032

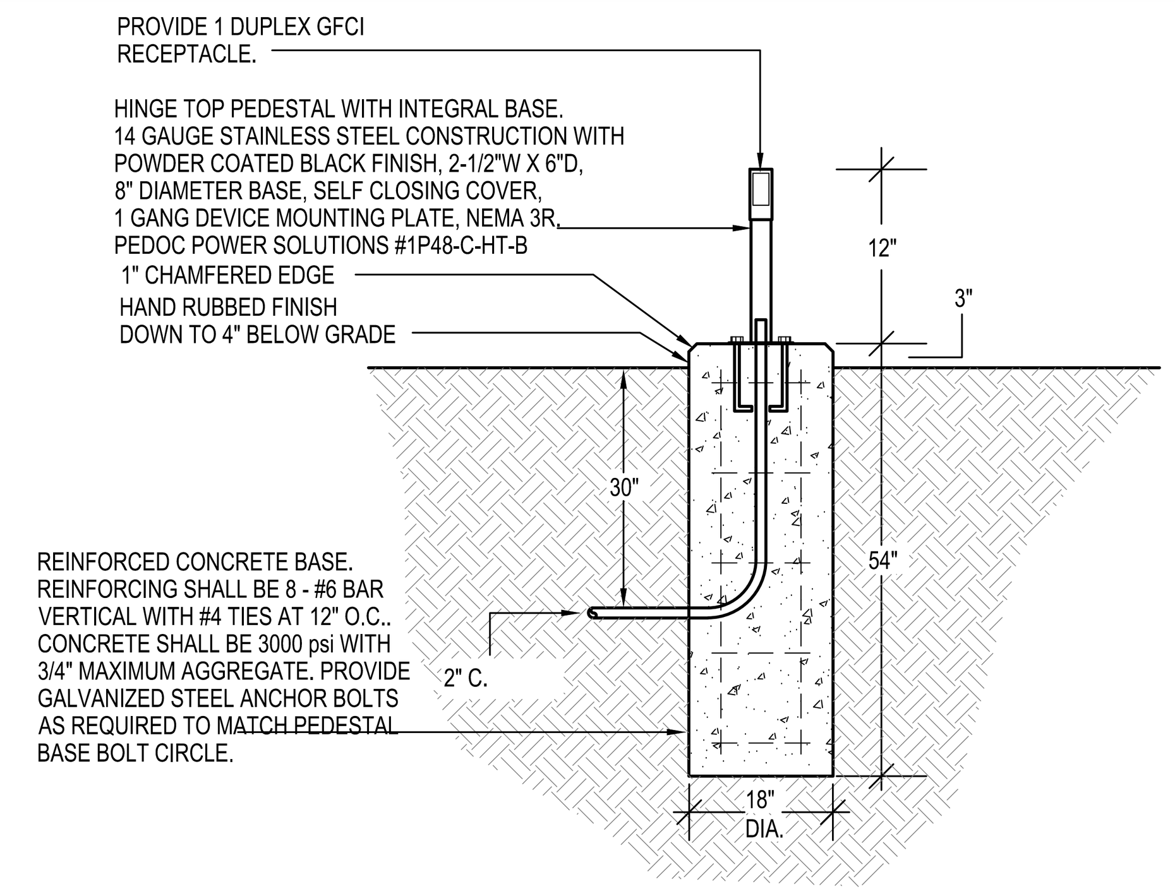
TITLE
ELECTRICAL SYMBOLS, SCHEDULE, NOTES & DETAILS

DATE:
NOVEMBER 8, 2024

DWG. NO.



TYPE CC BASKETBALL LIGHTING STANDARD DETAIL - LUMINAIRE AIMING
NTS



TREE RECEPTACLE DETAIL
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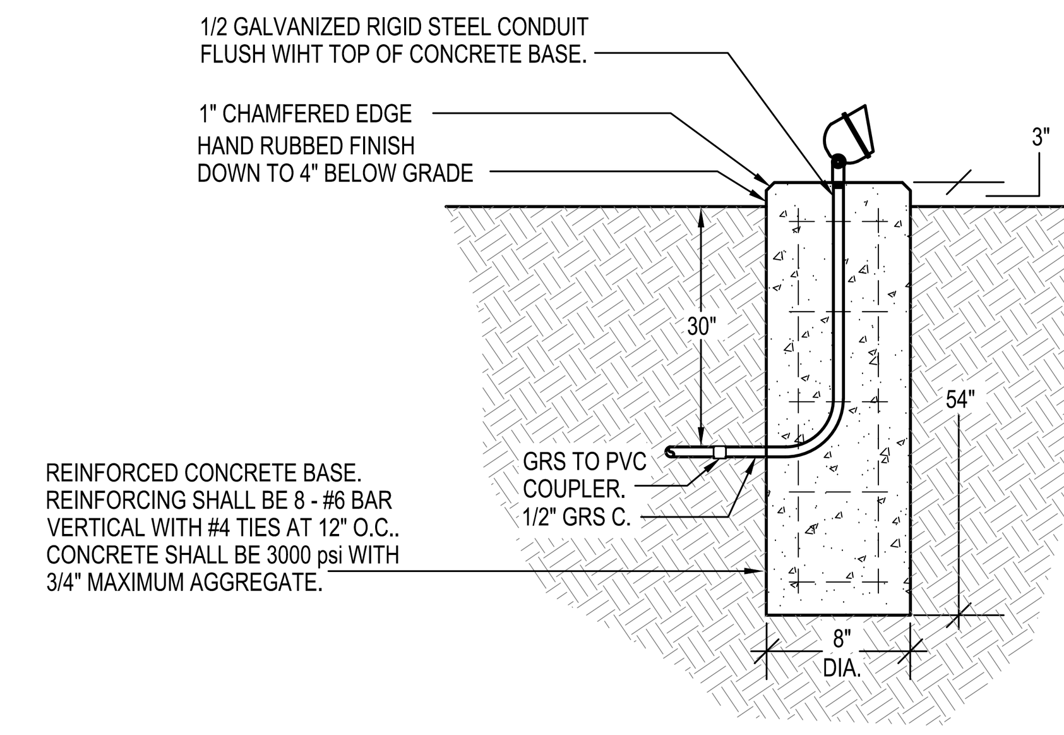

SIGN LIGHT DETAIL
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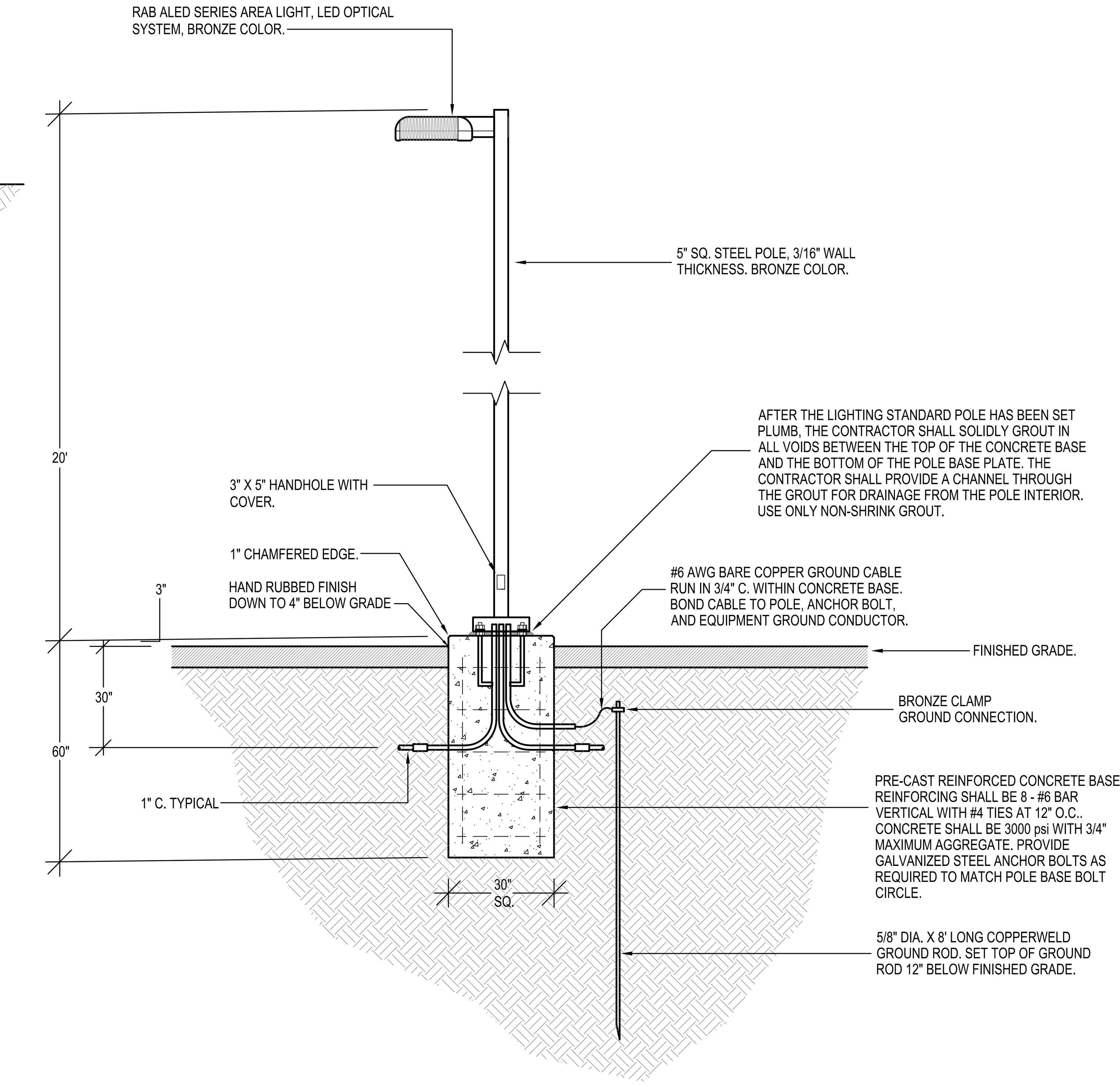

SITE LIGHTING STANDARD DETAIL - TYPE EE1
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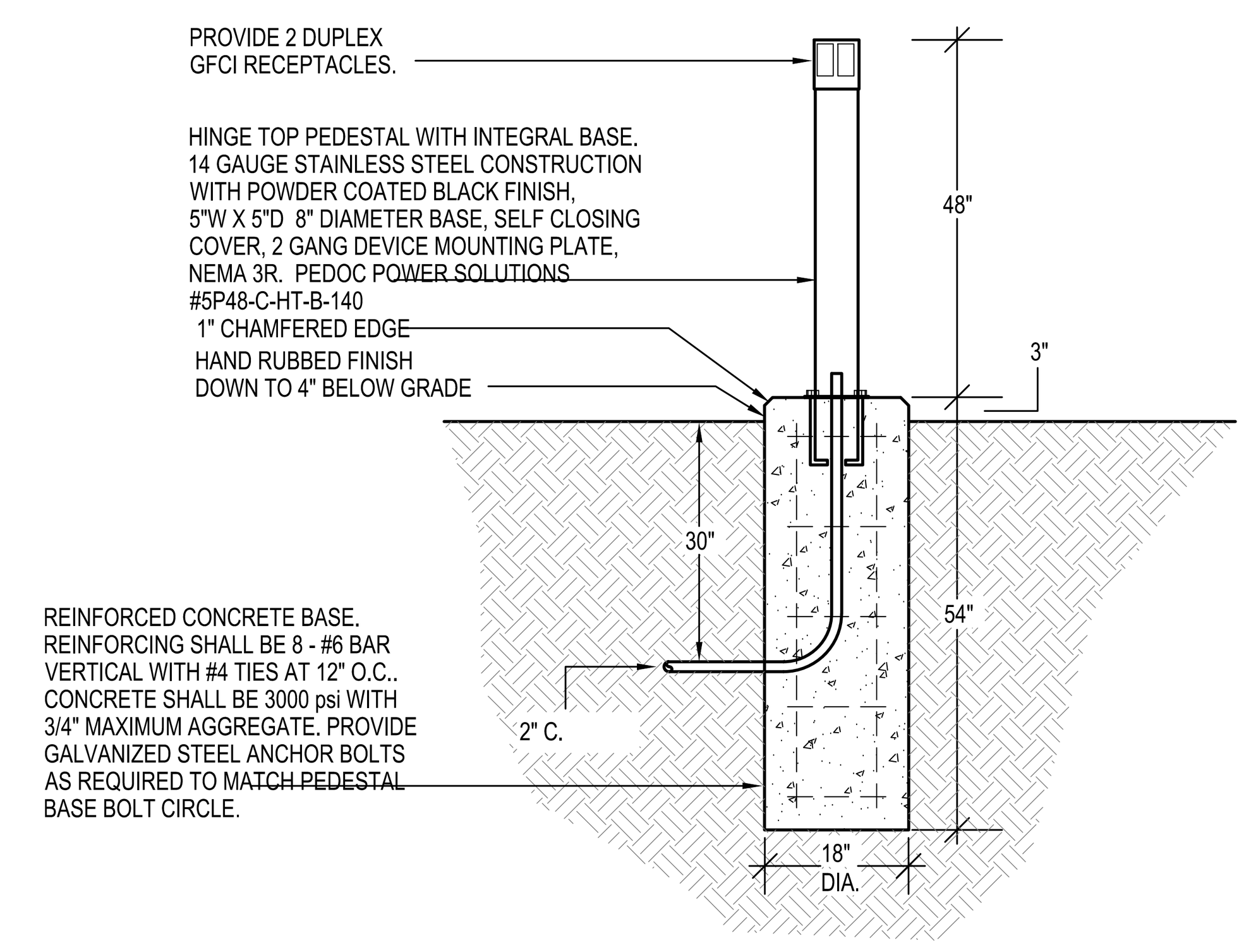

SITE RECEPTACLE DETAIL
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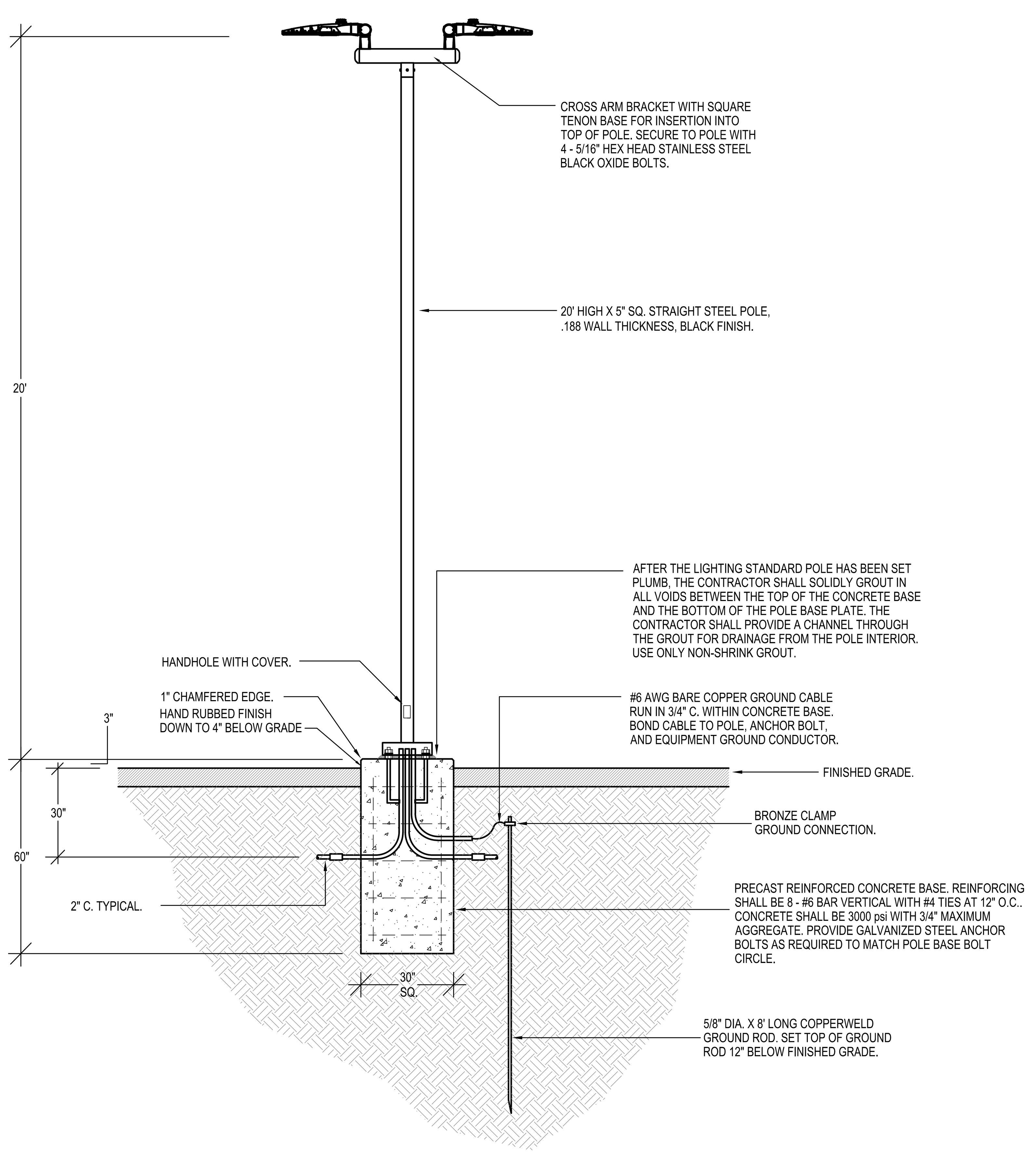

BASKETBALL LIGHTING STANDARD DETAIL
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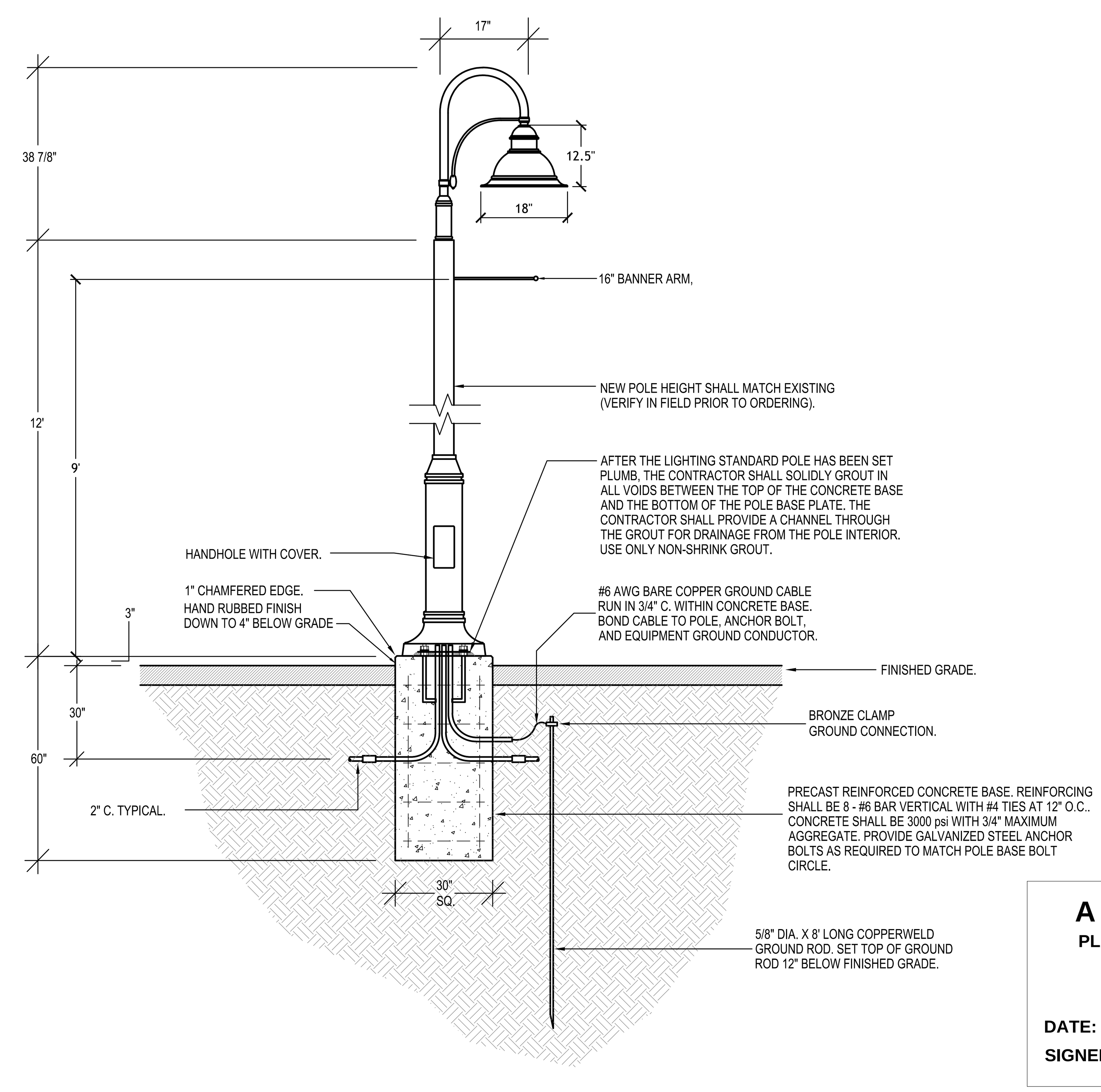

GOOSENECK LIGHTING STANDARD DETAIL
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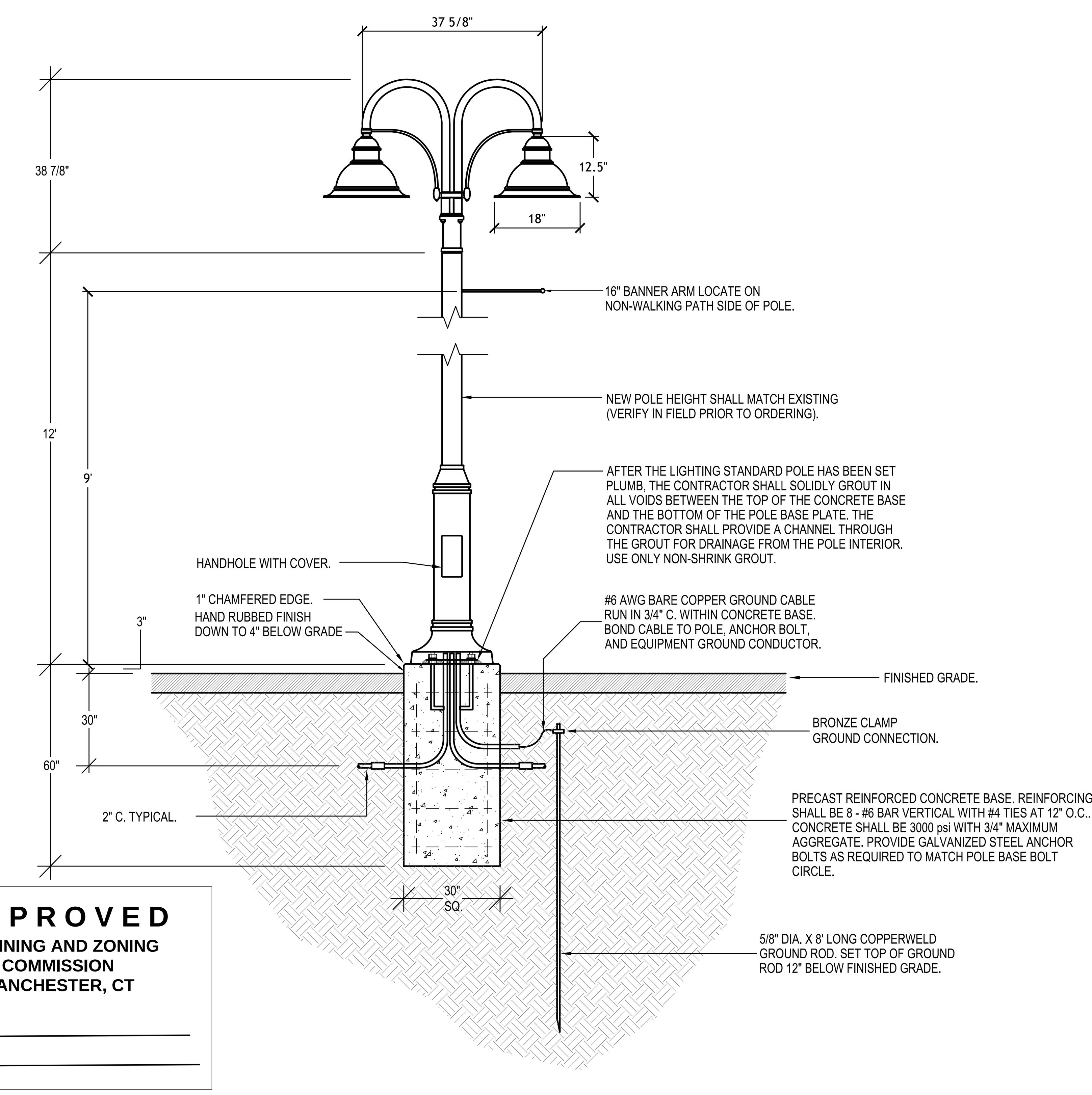

DUAL GOOSENECK LIGHTING STANDARD DETAIL
NTS

APPROVED
PLANNING AND ZONING COMMISSION
MANCHESTER, CT

DATE: ____________________

SIGNED: ____________________

REVISIONS

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SPRUCE STREET, MANCHESTER CONNECTICUT

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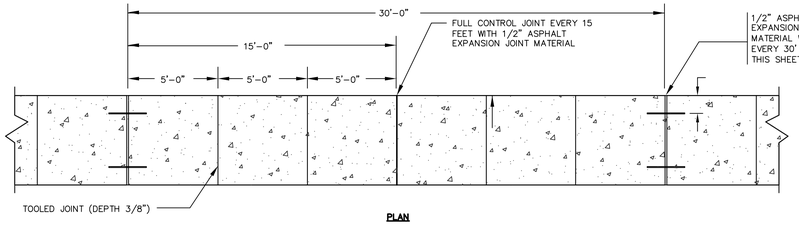
Fax: (860) 321-7070
w.w.w.bemisassociates.com

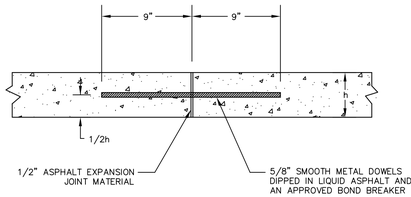
TITLE
ELECTRICAL SITE DETAILS

DATE:
NOVEMBER 8, 2024

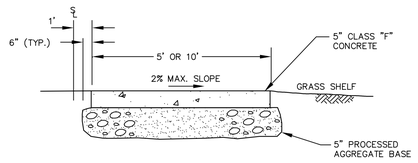
DWG. NO.



PLAN



EXPANSION JOINT - DETAIL

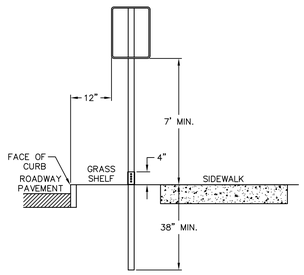


SECTION

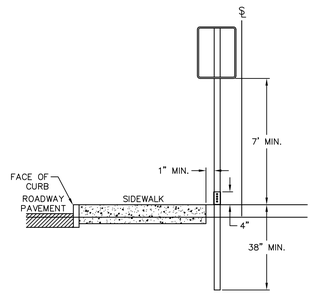
NOTES:
1. A MINIMUM 48" CLEAR WIDTH SHALL BE MAINTAINED BETWEEN THE EDGES OF THE SIDEWALK AND ANY OBSTRUCTIONS WITHIN THE SIDEWALK LIMITS.
2. AT THE END OF THE DAILY POUR OF CONCRETE, METAL DOWELS ARE TO BE INSERTED IN THE LAST SLAB FOR THE EXTENSION OF THE SIDEWALK.
3. INSTALL APPROVED BOND BREAKER BETWEEN GRANITE CURB AND SIDEWALK.
4. FOR 10' WIDE SIDEWALKS, USE A FULL CONTROL JOINT AT 5' LONGITUDINALLY.

5" CONCRETE SIDEWALK

NOT TO SCALE



SECTION WITH SIDEWALK AND GRASS SHELF

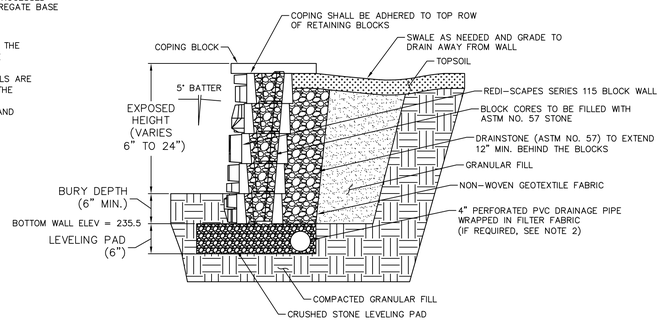


SECTION WITH SIDEWALK AND NO GRASS SHELF

NOTES:
1. SUPPORTS SHALL BE METAL GALVANIZED STEEL POSTS WITH BREAKAWAY COUPLING SYSTEM.
2. WHERE POSTS CANNOT BE INSTALLED BEHIND SIDEWALK, THEY SHALL BE INSTALLED WITH THE EDGE OF THE SIGN 12" FROM FACE OF CURB.

SIGN INSTALLATION - TYPICAL

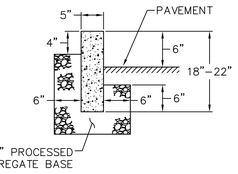
NOT TO SCALE



NOTES:
1. SEGMENTAL BLOCK WALLS AND ALL COMPONENTS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND AS DIRECTED BY THE ENGINEER.
2. GEOGRID REINFORCING FABRIC AND DRAINAGE PIPE SHALL BE INSTALLED IF REQUIRED BASED ON SITE CONDITIONS IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER.

SEGMENTAL BLOCK RETAINING WALL

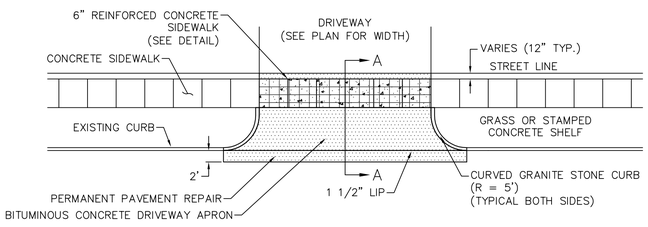
NOT TO SCALE



GRANITE CURB NOTES:
1. MINIMUM LENGTH OF GRANITE CURB IS 4'-0".
2. GRANITE CURB SHALL BE FINISH-SAWN TOP AND SPLIT FACE JOINTED.
3. ALL GRANITE CURB JOINTS SHALL BE SET IN 6" OF CLASS "C" CONCRETE AND MORTAR SHALL BE APPLIED ALONG THE HEIGHT AND WIDTH OF ALL ABUTTING CURB FACES.
4. GRANITE CURB WITH A RADIUS OF 100' OR LESS SHALL BE BUILT OF RADIUS GRANITE CURB AND SET IN 6" OF CONCRETE ALONG THE ENTIRE LENGTH.
5. STRAIGHT AND RADIUS GRANITE CURB SHALL BE USED FOR TRANSITION CURB AT DRIVEWAYS AND SIDEWALK RAMPS WHERE APPLICABLE.
6. THE JOINTS OF RESET GRANITE STONE CURB SHALL BE SET IN 6" OF CONCRETE.

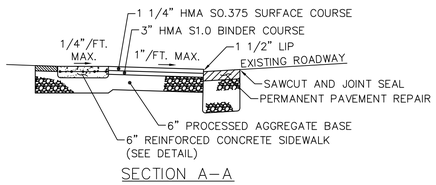
GRANITE STONE CURB
CURVED GRANITE STONE CURB

NOT TO SCALE



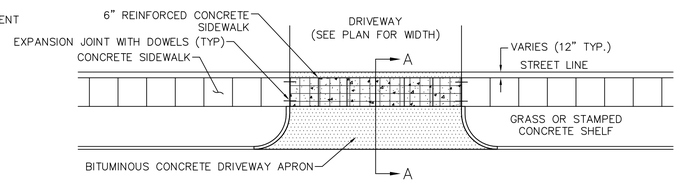
PLAN

NOTE:
1. SEE RESPECTIVE DETAILS FOR CONCRETE SIDEWALK, GRANITE STONE CURB AND PERMANENT PAVEMENT REPAIR

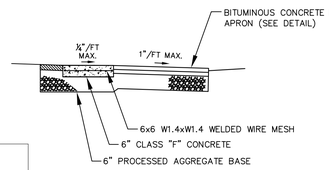


SECTION A-A

BITUMINOUS CONCRETE DRIVEWAY APRON



PLAN

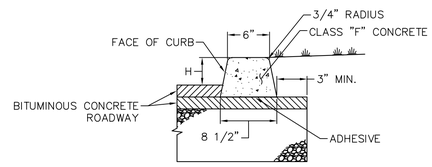


SECTION A-A

NOTES:
1. A CONCRETE DRIVEWAY APRON THAT EXTENDS FROM THE BACK OF SIDEWALK TO THE ROAD GUTTER SHALL BE INSTALLED WHERE SHELF WIDTH IS LESS THAN 3 FT. SEE APPROPRIATE DETAIL.
2. SEE RESPECTIVE DETAILS FOR CONCRETE SIDEWALK AND CURB.
3. ALL DRIVEWAY RECONSTRUCTION INCLUDING SAWCUT AND JOINT SEAL SHALL BE PAID FOR AS "BITUMINOUS CONCRETE DRIVEWAY".

6" REINFORCED CONCRETE SIDEWALK
(ACROSS DRIVEWAYS)

NOT TO SCALE



NOTE:
CURB HEIGHT (H) SHALL BE AS SPECIFIED ON THE PLANS.

EXTRUDED CONCRETE CURB

NOT TO SCALE

APPROVED
PLANNING AND ZONING COMMISSION MANCHESTER, CT

DATE: _____

SIGNED: _____

TOWN OF MANCHESTER
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
494 MAIN STREET - P.O. BOX 191
MANCHESTER, CT 06045-0191

LEGEND

WETLANDS BOUNDARY	LIGHT POLE
RETAINING WALL	CONIFEROUS TREE
GUIDE RAIL	DECIDUOUS TREE
STONE WALL	SANITARY MANHOLE
STOCKADE FENCE	DRAINAGE MANHOLE
WIRE FENCE	CATCH BASIN
CHAIN LINK FENCE	CULVERT END
PROPERTY LINE	HYDRANT
RAILROAD TRACKS	CURB STOP
SILT FENCE	WATER VALVE
CONCRETE MONUMENT	BUTTERFLY VALVE
GRANITE MONUMENT	BLOW OFF
IRON PIPE	SIGN
IRON ROD	DOUBLE POST SIGN
CONTROL POINT	MAIL BOX
DRILL HOLE	BOLLARD
UTILITY POLE	CONTROLLER CABINET
UTILITY POLE WITH LIGHT	GAS GATE
TRAFFIC SPAN POLE	TELEPHONE BOX
ELECTRIC BOX	CATV TUBE
METLAND FLAG	

PROJECT NUMBER
2023111

FILENAME
2023111-PLAN.DWG

NO.	DATE	FILE
–	11/08/24	FOR BIDDING

DRAWN BY: JL
CHECKED BY: JL
RELEASED BY: TB

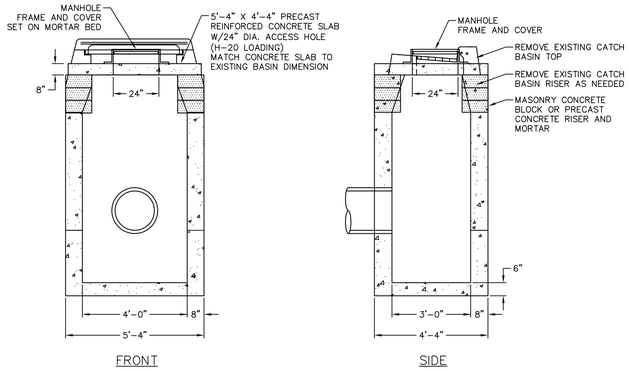
DATUM
HORIZONTAL: NAD83 VERTICAL: NAVD88

PROJECT LOCATION
SPRUCE STREET MANCHESTER, CT

PROJECT TITLE
STREETSCAPE IMPROVEMENTS SPRUCE STREET AT NATHAN HALE SCHOOL

SHEET TITLE
DETAILS

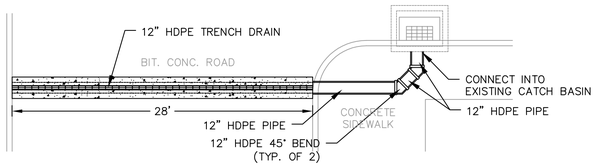
SHEET NUMBER
19 of 22



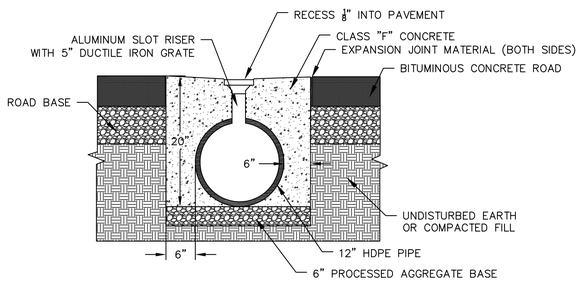
NOTES:
1. USE CONCRETE BLOCKS OR PRECAST RISER AND THE CONCRETE SLAB TO BRING THE MANHOLE COVER TO GRADE.
2. TYPE "C" CATCH BASIN TOP IS SHOWN; HOWEVER, DETAIL ALSO APPLIES TO TYPE "C-L" CATCH BASIN TOPS.

CONVERT CATCH BASIN TO MANHOLE

NOT TO SCALE



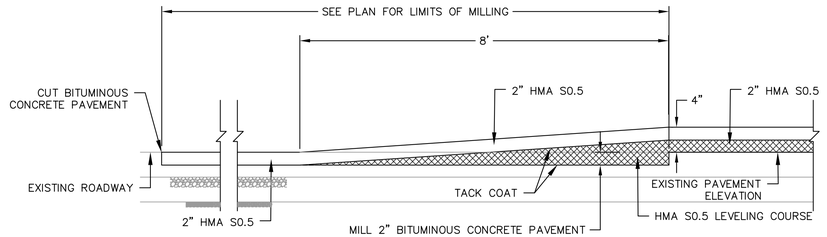
PLAN



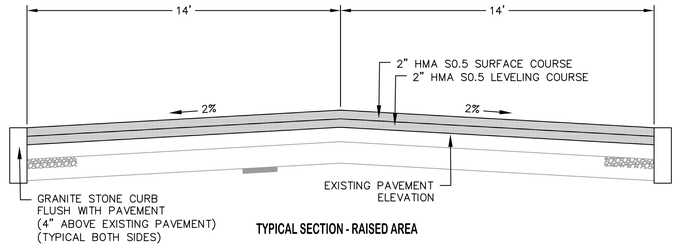
SECTION

TRENCH DRAIN

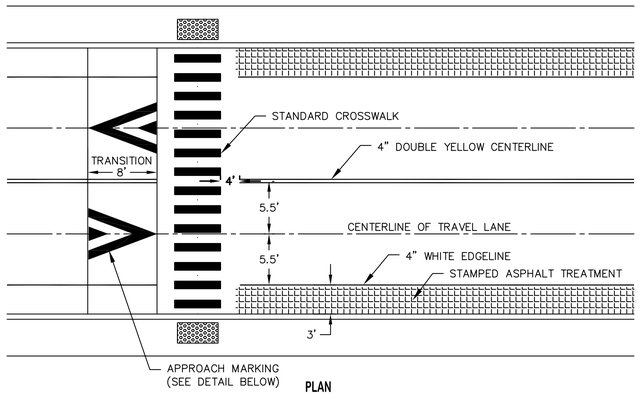
NOT TO SCALE



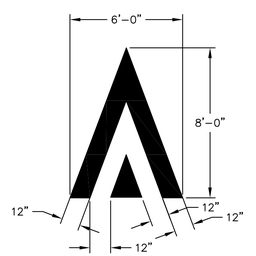
LONGITUDINAL TRANSITION AREA - HMA OVERLAY



TYPICAL SECTION - RAISED AREA



PLAN



APPROACH PAVEMENT MARKING DETAIL

RAISED INTERSECTION

NOT TO SCALE

APPROVED
PLANNING AND ZONING COMMISSION MANCHESTER, CT

DATE: _____

SIGNED: _____

TOWN OF MANCHESTER
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
494 MAIN STREET – P.O. BOX 191
MANCHESTER, CT 06045-0191

LEGEND

WETLANDS BOUNDARY	LIGHT POLE
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STONE WALL	SANITARY MANHOLE
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PROPERTY LINE	HYDRANT
RAILROAD TRACKS	CURB STOP
SILT FENCE	WATER VALVE
CONCRETE MONUMENT	BUTTERFLY VALVE
GRANITE MONUMENT	BLOW OFF
IRON PIPE	SIGN
IRON ROD	DOUBLE POST SIGN
CONTROL POINT	MAIL BOX
DRILL HOLE	BOLLARD
UTILITY POLE	CONTROLLER CABINET
UTILITY POLE WITH LIGHT	GAS GATE
TRAFFIC SPAN POLE	TELEPHONE BOX
ELECTRIC BOX	CATV TUBE
WETLAND FLAG	

PROJECT NUMBER
2023111

FILENAME
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NO.	DATE	FILE
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DRAWN BY: JL
CHECKED BY: JL
RELEASED BY: TB

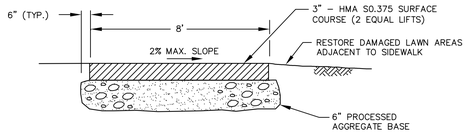
DATUM
HORIZONTAL: NAD83 VERTICAL: NAVD88

PROJECT LOCATION
SPRUCE STREET MANCHESTER, CT

PROJECT TITLE
STREETSCAPE IMPROVEMENTS SPRUCE STREET AT NATHAN HALE SCHOOL

SHEET TITLE
DETAILS

SHEET NUMBER
20 of 22

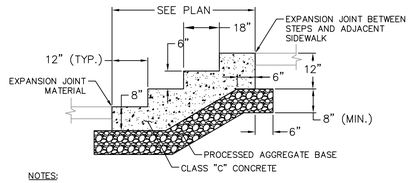


SECTION

NOTES:
1. A MINIMUM 48" CLEAR WIDTH SHALL BE MAINTAINED BETWEEN THE EDGES OF THE SIDEWALK AND ANY OBSTRUCTIONS WITHIN THE SIDEWALK LIMITS.

BITUMINOUS CONCRETE SIDEWALK

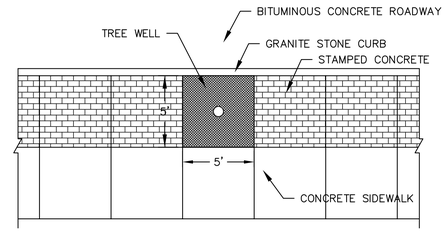
NOT TO SCALE

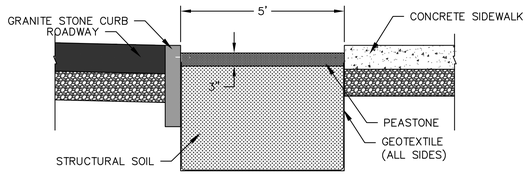


NOTES:
1. ALL STEPS SHALL HAVE UNIFORM RISER HEIGHTS AND UNIFORM TREAD DEPTHS. RISERS SHALL BE A MINIMUM OF 4" HIGH TO A MAXIMUM OF 7" HIGH. TREADS SHALL BE A MINIMUM OF 11" DEEP MEASURED FROM RISER TO RISER WITH A PITCH OF 1/4".

CONCRETE STEPS

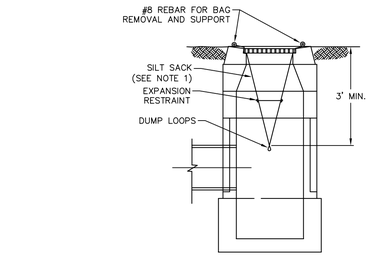
NOT TO SCALE





TREE WELL

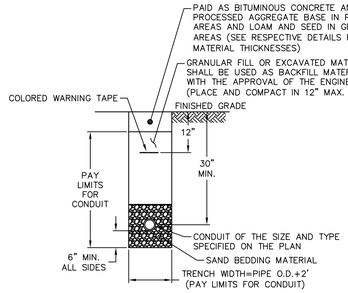
NOT TO SCALE



NOTES:
1. SILT SACKS SHALL BE HI-FLOW SILTSACK® 'TYPE A' FOR TYPE "C-L" CB TOPS AND 'TYPE B' WITH CURB DEFLECTORS FOR TYPE "C" CB TOPS OR OTHER STRUCTURES WITH CURB INLETS AS MANUFACTURED BY ACF ENVIRONMENTAL, INC OR APPROVED EQUAL.
2. SILT SACKS SHALL BE PROVIDED WITH INTERNAL OVERFLOWS.
3. SILT SACKS SHALL BE EMPTIED WHEN THEY HAVE COLLECTED 6" TO 12" OF SEDIMENT. INSPECT EVERY 1 TO 2 WEEKS AND AFTER EVERY MAJOR RAINFALL EVENT.

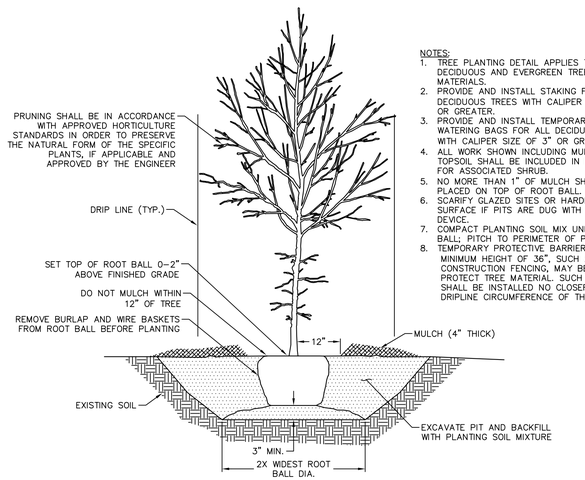
SILT SACK

NOT TO SCALE



CONDUIT IN TRENCH

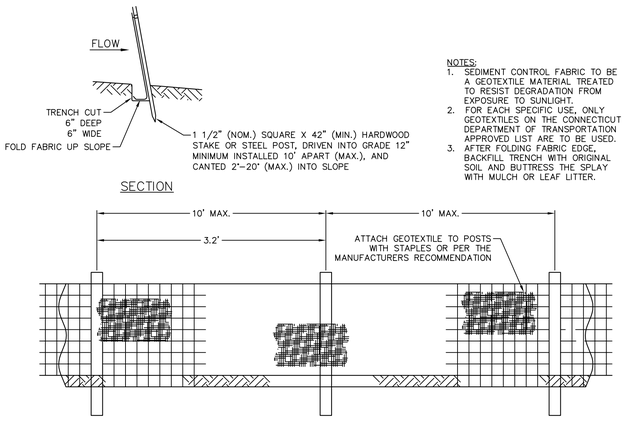
NOT TO SCALE



NOTES:
1. TREE PLANTING DETAIL APPLIES TO BOTH DECIDUOUS AND EVERGREEN TREE MATERIALS.
2. PROVIDE AND INSTALL STAKING FOR ALL DECIDUOUS TREES WITH CALIPER SIZE OF 3" OR GREATER.
3. PROVIDE AND INSTALL TEMPORARY TREE WATERING BAGS FOR ALL DECIDUOUS TREES WITH CALIPER SIZE OF 3" OR GREATER.
4. ALL WORK SHOWN INCLUDING MULCH AND 4" TOPSOIL SHALL BE INCLUDED IN PAYMENT FOR ASSOCIATED SHRUB.
5. NO MORE THAN 1" OF MULCH SHALL BE PLACED ON TOP OF ROOT BALL.
6. SCARIFY GLAZED SITES OR HARDENED SURFACE IF PITS ARE DUG WITH AUGERING DEVICE.
7. COMPACT PLANTING SOIL MIX UNDER ROOT BALL; PITCH TO PERIMETER OF PIT.
8. TEMPORARY PROTECTIVE BARRIER WITH A MINIMUM HEIGHT OF 36", SUCH AS CONSTRUCTION FENCING, MAY BE USED TO PROTECT TREE MATERIAL. SUCH BARRIER SHALL BE INSTALLED NO CLOSER THAN THE DRIPLINE CIRCUMFERENCE OF THE PLANTING.

TREE PLANTING

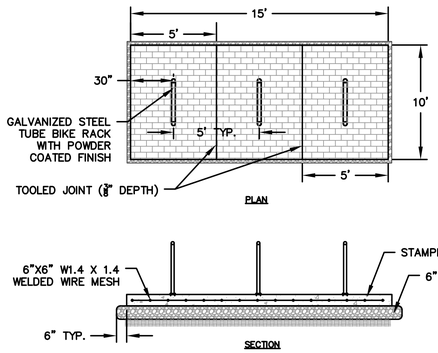
NOT TO SCALE



NOTES:
1. SEDIMENT CONTROL FABRIC TO BE A GEOTEXTILE MATERIAL TREATED TO RESIST DEGRADATION FROM EXPOSURE TO SUNLIGHT.
2. FOR EACH SPECIFIC USE, ONLY GEOTEXTILES ON THE CONNECTICUT DEPARTMENT OF TRANSPORTATION APPROVED LIST ARE TO BE USED.
3. AFTER FOLDING FABRIC EDGE, BACKFILL TRENCH WITH ORIGINAL SOIL AND BUTTRESS THE SPLAY WITH MULCH OR LEAF LITTER.

SILT FENCE

NOT TO SCALE



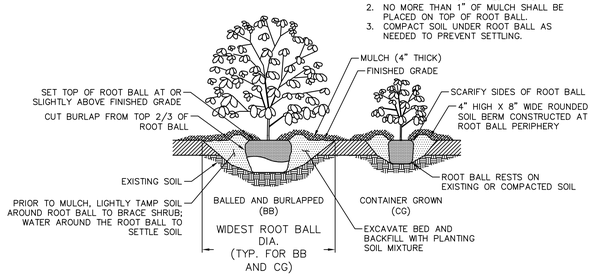
BIKE RACKS AND PAD

NOT TO SCALE

APPROVED
PLANNING AND ZONING COMMISSION MANCHESTER, CT

DATE: _____

SIGNED: _____



NOTES:
1. ALL WORK SHOWN INCLUDING MULCH AND 4" TOPSOIL SHALL BE INCLUDED IN PAYMENT FOR ASSOCIATED SHRUB.
2. NO MORE THAN 1" OF MULCH SHALL BE PLACED ON TOP OF ROOT BALL.
3. COMPACT SOIL UNDER ROOT BALL AS NEEDED TO PREVENT SETTLING.

SHRUB PLANTING

NOT TO SCALE

TOWN OF MANCHESTER
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
494 MAIN STREET – P.O. BOX 191
MANCHESTER, CT 06045-0191

LEGEND

WETLANDS BOUNDARY	LIGHT POLE
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GRANITE MONUMENT	BLOW OFF
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UTILITY POLE	CONTROLLER CABINET
UTILITY POLE WITH LIGHT	GAS GATE
TRAFFIC SPAN POLE	TELEPHONE BOX
ELECTRIC BOX	CATV TUBE
WETLAND FLAG	

PROJECT NUMBER
2023111

FILENAME
2023111-PLAN.DWG

NO.	DATE	FILE
–	11/08/24	FOR BIDDING

DRAWN BY: JL
CHECKED BY: JL
RELEASED BY: TB

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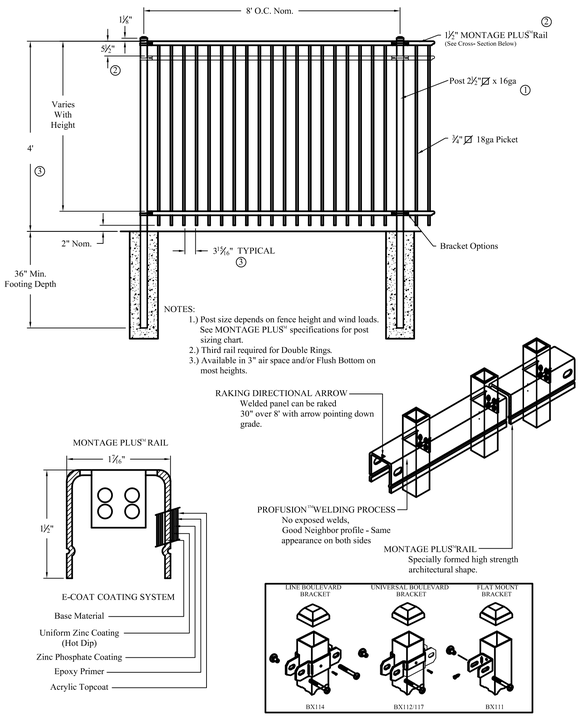
HORIZONTAL: NAD83 VERTICAL: NAVD88

PROJECT LOCATION
SPRUCE STREET MANCHESTER, CT

PROJECT TITLE
STREETSCAPE IMPROVEMENTS SPRUCE STREET AT NATHAN HALE SCHOOL

SHEET TITLE
DETAILS

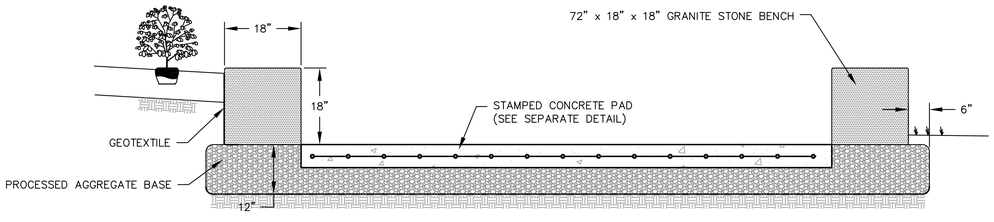
SHEET NUMBER
21 of 22



NOTES:
1.) Post size depends on fence height and wind loads. See MONTAGE PLUS™ specifications for post sizing chart.
2.) Third rail required for Double Rings.
3.) Available in 3" air space and/or Flush Bottom on most heights.

ORNAMENTAL STEEL FENCE

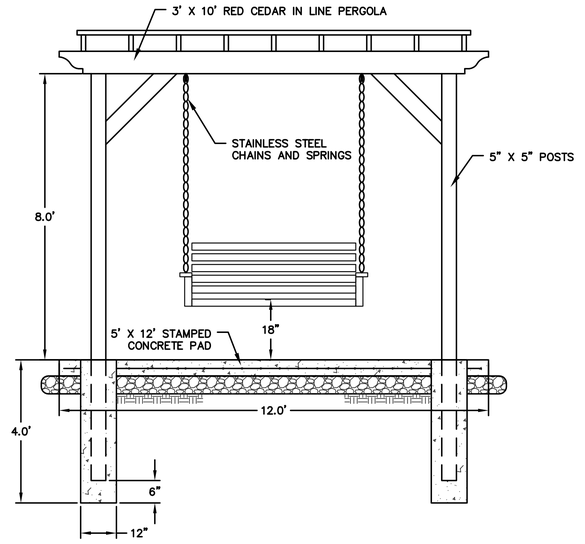
NOT TO SCALE



SECTION

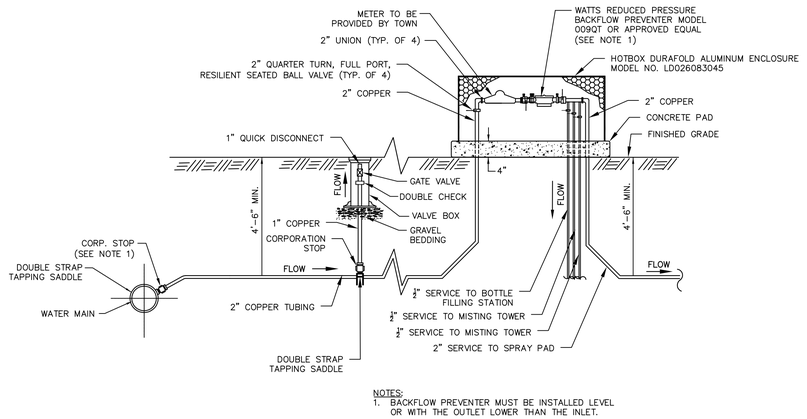
GRANITE BLOCK SITTING WALL

NOT TO SCALE



PERGOLA WITH SWING

NOT TO SCALE



NOTES:
1. BACKFLOW PREVENTER MUST BE INSTALLED LEVEL OR WITH THE OUTLET LOWER THAN THE INLET.

WATER SERVICE

NOT TO SCALE

APPROVED
PLANNING AND ZONING COMMISSION MANCHESTER, CT

DATE: _____

SIGNED: _____

TOWN OF MANCHESTER
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
494 MAIN STREET – P.O. BOX 191
MANCHESTER, CT 06045-0191

LEGEND

WETLANDS BOUNDARY	LIGHT POLE
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ELECTRIC BOX	CATV TUBE
WETLAND FLAG	

PROJECT NUMBER
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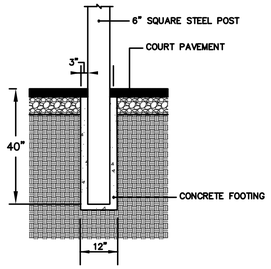
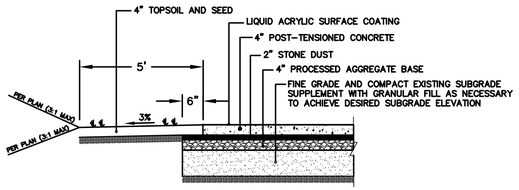
22 of 22



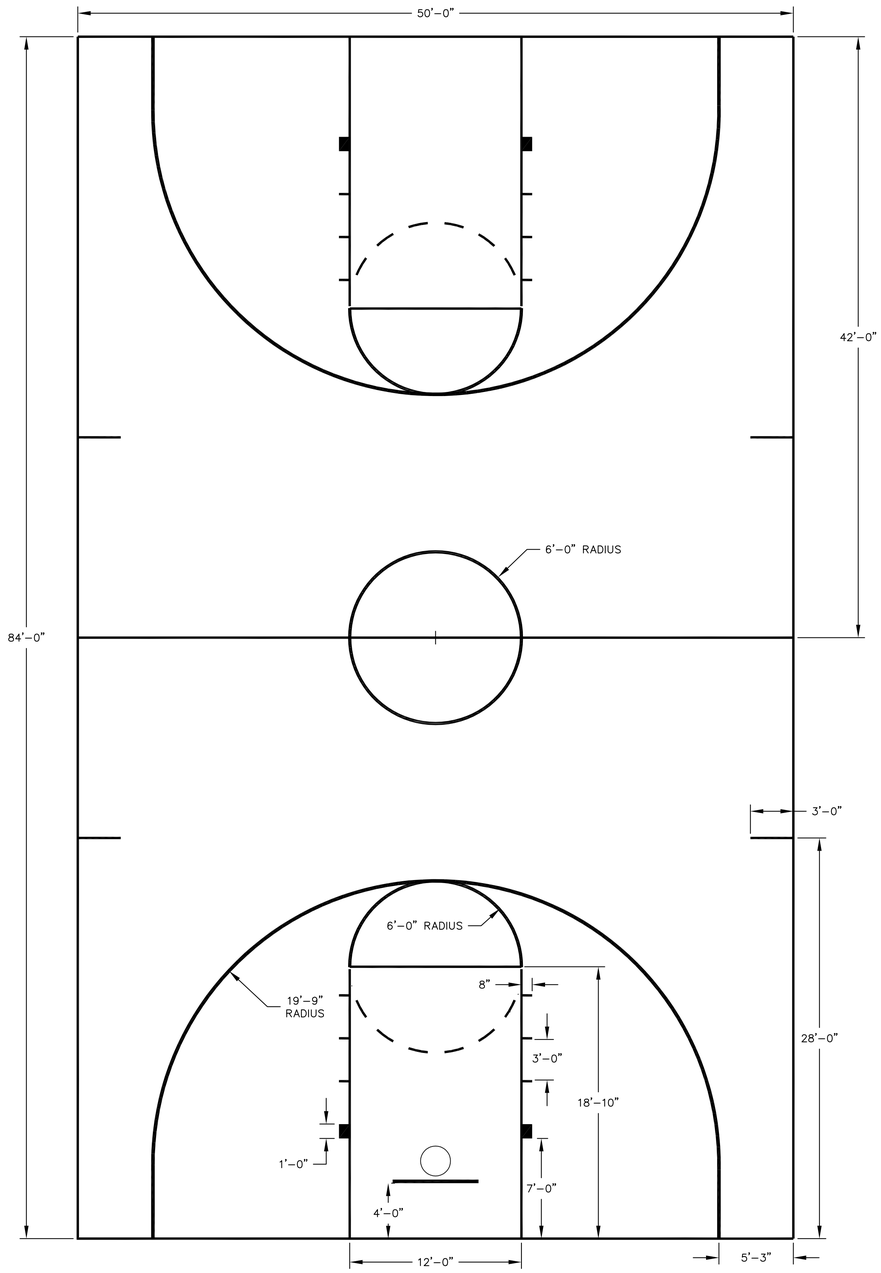
BASKETBALL HOOP POST FOUNDATION

NOT TO SCALE



TYPICAL COURT SECTION

NOT TO SCALE



MARKINGS

SCALE: 1" = 5'

APPROVED
PLANNING AND ZONING COMMISSION MANCHESTER, CT

DATE: _____

SIGNED: _____

TOWN OF MANCHESTER
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
494 MAIN STREET – P.O. BOX 191
MANCHESTER, CT 06045-0191

LEGEND

- = WETLANDS BOUNDARY
- = RETAINING WALL
- = GUIDE RAIL
- = STONE WALL
- = STOCKADE FENCE
- = WIRE FENCE
- = CHAIN LINK FENCE
- = PROPERTY LINE
- = RAILROAD TRACKS
- = SILT FENCE
- = CONCRETE MONUMENT
- = GRANITE MONUMENT
- = IRON PIPE
- = IRON ROD
- = CONTROL POINT
- = DRILL HOLE
- = UTILITY POLE
- = UTILITY POLE WITH LIGHT
- = TRAFFIC SPAN POLE
- = ELECTRIC BOX
- = WETLAND FLAG
- = LIGHT POLE
- = CONIFEROUS TREE
- = DECIDUOUS TREE
- = SANITARY MANHOLE
- = DRAINAGE MANHOLE
- = CATCH BASIN
- = CULVERT END
- = HYDRANT
- = CURB STOP
- = WATER VALVE
- = BUTTERFLY VALVE
- = BLOW OFF
- = SIGN
- = DOUBLE POST SIGN
- = MAIL BOX
- = BOLLARD
- = CONTROLLER CABINET
- = GAS GATE
- = TELEPHONE BOX
- = CATV TUBE

PROJECT NUMBER
2023111

FILENAME
2023111-PLAN.DWG

NO.	DATE	FILE
–	11/08/24	FOR BIDDING

DRAWN BY: JL
CHECKED BY: JL
RELEASED BY: TB

DATUM
HORIZONTAL: NAD83 VERTICAL: NAVD88

PROJECT LOCATION
SPRUCE STREET MANCHESTER, CT

PROJECT TITLE
STREETSCAPE IMPROVEMENTS SPRUCE STREET AT NATHAN HALE SCHOOL

SHEET TITLE
DETAILS

SHEET NUMBER
ALTERNATE BID NO. 1

SHEET 1 OF 1

DRAFT

TOWN OF MANCHESTER
MINUTES OF PUBLIC HEARING
HELD BY THE PLANNING AND ZONING COMMISSION
JANUARY 6, 2025

MEMBERS PRESENT:

In Person:	Eric Prause, Chairperson
	Patrick Kennedy, Vice Chairperson
	Daniela Luna, Secretary
	Michael Stebe
	Chris Schoeneberger
	Michael Farina

ALTERNATE MEMBERS SITTING:

Electronically:	Sara Van Buren

ALTERNATES PRESENT:

In Person:	Maliha Ahsan

ABSENT:

Teresa Ike
Zachary Schurin

ALSO PRESENT:

In Person:	Megan Pilla, Principal Development Planner
	Gary Anderson, Director of Planning and Economic Development
	David Laiuppa, Environmental Planner/Wetlands Agent
Electronically:	Nancy Martel, Recording Secretary

The Chairman opened the Public Hearing at 7:00 P.M. The Secretary read the legal notice when the call was made.

STEPHEN GIUDICE **(*continued from December 9, 2024)*** – Request a special exception under Art. II, Sec. 24.02.01(h) for a proposed autobody repair facility at 130R Spencer Street. – Special Exception (PSE-0018-2024) **(*Request to continue to February 3, 2025)***

Mr. Bryan Panico reported the steps taken since the last meeting.

Ms. Pilla stated that a continuation to February 3rd will require an extension of the statutory deadline.

Mr. Farina expressed his concerns about (a) suitable location for use and (b) neighborhood compatibility. The location is next to Squire Village, which has at-risk children, and there seems to be a tendency to put industrial types of facilities next to poor people with an increase in

asthma and other respiratory illnesses. He reported his research regarding toxins in close proximity to low-income housing as well as the senior housing. Mr. Farina questioned the air handling of the entire facility.

Attorney Cheryl Green introduced herself as the Chief Legal Officer for Calamar, an active adult senior housing facility. On behalf of the owner and operator of the facility, she respectfully requested that the public comment period be extended to allow residents to provide input.

Mr. Mark Gray, 140 Spencer Street, Apt. 107, Connect 55 Plus, noted that Manchester has many autobody repair facilities, all located in industrial areas. Mr. Gray suggested utilizing the many vacant commercial buildings available within the town. He speculated on the effect that the proposed use will have.

Mr. Panico sought Ms. Pilla's confirmation that the full file is available to the public, which she confirmed.

Ms. Margaret Brewer, 203 Ralph Road, introduced herself. She felt that there must be an industrial zone within Manchester that would better accommodate this facility.

Special Exception (PSE-0018-2024)

MOTION: Mr. Kennedy moved to continue the public hearing to February 3, 2025. Mr. Farina seconded the motion, and all members voted in favor.

Ms. Pilla described the ways any member of the public can view the file.

STEPHEN GIUDICE – Request a special exception under Art. II, Sec. 24.02.01(c) for a proposed retail and self-storage facility at 53, 71, 77, 89, 89A, 99, and 113 Spencer Street. – Special Exception (PSE-0015-2024)

Attorney Stephen Penny introduced himself as representing the applicant, U-Haul of Central Connecticut. Attorney Penny described the location, zoning and abutters of the property as well as the utilities onsite. There are no wetlands onsite. The property is owned by Americo Real Estate Company, an entity within the U-Haul organization.

Art. II, Sec. 24 sets forth the permitted uses in the General Business zone, which Attorney Penny explained. Under the zoning regulations, the proposed use is appropriate, which he elaborated upon. The traffic potential was described. The General Business zone classification and the mixed residential and commercial uses permitted therein are supported by the site's accessibility to the highway network. The use is appropriate in this location due to its compatibility with the regulation intended, mixed use commercial and residential character along this stretch of Spencer Street.

Attorney Penny reported that the General Business zone classification, inclusion of the proposed use as of right (retail) and by special permit (self-storage), the substantial road network in place and the compatibility of the proposed use all militate in favor of the proposed uses at this location.

In looking at the regulations, the General Business zone was crafted, in part, to allow a mix of uses including retail and self-storage facilities. Attorney Penny highlighted several examples where the project complies with the Plan of Conservation and Development, noting that the previous POCD characterized the site and environs as part of a mixed-use regional center that extended along both sides of Spencer Street, I-384 on the west and Olcott Street on the east. "This corridor can become an inviting place offering a mix of residential, commercial and other uses."

Attorney Penny reported that the project involves the construction of a new 36,419 sq. ft. three-story self-storage facility along the frontage of the parcel on Spencer Street, including a small retail area on the first floor and 670 storage units. A second building, 13,785 sq. ft., will be constructed at the rear of the site for the storage of U-Box transportable storage units.

Mr. Bryan Panico, Cole Civil Survey, introduced himself and referred to the site plan. The details of the building along Spencer Street were explained. He noted that there will be a curb cut directly across from Imperial Drive for traffic safety reasons. The main entrance leads to the back of the building where all the parking and truck circulation take place. Mr. Panico described the U-Box building and its uses.

The landscape plan and the storm water drainage plans were explained by Mr. Panico. He noted that there is a wetland offsite, as well as a swale. In the comments, the question arose whether that swale could handle storm water runoff from this new development. The short answer is yes, it can, which he detailed. Using analysis from the Connecticut Storm Water Quality manual, they are able to reduce pollutants that would be entering that swale and ultimately the wetland.

Mr. Panico described the water and sewer from Spencer Street. Both buildings will flow to a pump chamber and the sewer will be pumped back to Spencer Street. There are separate fire and domestic lines. Referring to the fire hydrant, Mr. Panico explained that they are willing to comply with any recommendations from the Fire Marshal.

Referring to the parking area and detention basin, Mr. Panico stated that one of the biggest contaminants is plowed snow, as it picks up debris and contaminants from the pavement, and he described their plan for a snow storage area.

Mr. Panico noted that Mr. Scott Hesketh provided the traffic study. Overall, his findings were (1) keeping the driveway directly across from Imperial Drive is the safest option and (2) Spencer Street itself can easily handle the additional traffic volume. The traffic volume was explained in detail.

Details of the buildings were reported by Mr. Panico, who described the materials to be used on the outside of the building and the standard elevations of the buildings themselves. He described the height of the proposed building and grade change, replying to Mr. Stebe's inquiries.

Mr. Stebe noted that there will be truck parking in the front of the building and asked why they aren't keeping the green space.

Mr. William Cintas, President of U-Haul Connecticut, responded to Mr. Stebe's comments, noting that this is a standard display.

Mr. Stebe felt that, as an entry to Manchester, the existing U-Haul building already has the trucks. He asked what will happen to the current U-Haul building after the planned construction. Mr. Stebe was skeptical that there is enough need for more storage.

Mr. Cintas noted that they have outgrown the current location. He reported that the two locations will have two different products. The current storage is basically garages, whereas the new location will be climate-controlled.

Mr. Farina stated that, overall, as a storage facility, it is very tasteful. He expressed his concern about the amount of parking in the back and how it relates to environmental protection and conservation.

Mr. Panico reported that there are existing sidewalks, and the plan is to remove the curb cuts and repair the sidewalks.

After a remark from Mr. Farina, Attorney Penny commented that the wetlands issue has been covered, there will be no recreation on this particular site and the concept applies to the area. Attorney Penny elaborated on the traffic report prepared by Mr. Hesketh.

Mr. Cintas detailed the history and the success of the facility. He stated that customers have provided feedback that more storage is necessary at this facility. The operations of the facility were explained in detail by Mr. Cintas.

Mr. Stebe observed that the two facilities are not connected onsite; one must exit onto Spencer Street and drive to the second facility. He asked about the lighting plan, which Mr. Cintas and Mr. Panico provided.

Mr. Farina asked why there will not be a connection between the two facilities and was told it is due to the grade. He expressed concern about the plan to have two separate entities.

Mr. Panico noted that the majority of customers handle their business online.

Mr. Cintas stated that they will take another look at the situation.

Mr. Stebe sought confirmation that the existing office management space will move to the new facility.

Mr. Cintas commented that employees will still maintain the property and perform safety checks on the existing property.

Mr. Stebe felt that a customer leaving one location onto Spencer Street to go several feet down the road to enter the second location will be problematic.

Mr. Cintas commented that it has been his experience that most customers don't arrive at the facility with their car loaded, so there would be no need to go from one location to the other. There will be examples of each unit, which would eliminate the need for a customer to view their particular rental unit prior to loading.

Mr. Hesketh stated that, based on the low volume of traffic, a customer leaving one location to go to the other will be infrequent.

Mr. Cintas pointed out that there will be an intercom between the two locations for constant communication with the general manager and staff.

Attorney Penny summarized:

1. Suitable location for use
2. Adequate streets for use
3. Adequate parking
4. Public utilities
5. Suitable structures for use
6. Environmental – do no harm

Mr. Prause requested more information about security at the facility and waste removal, which Mr. Cintas provided. There are no public dumpsters onsite.

Ms. Pilla detailed a handful of comments from staff to be included as modifications to an approval, most of which have already been addressed.

After a question from Mr. Prause about modifications to the existing facility, Ms. Pilla stated that there is an area of grading and re-grading to accommodate the parking lot.

Ms. Margaret Brewer, 203 Ralph Road, Manchester, commented that a U-Haul empire should be built elsewhere, such as in an industrial area.

A conversation was held between Mr. Stebe and Mr. Cintas regarding a connection between the two facilities. Mr. Cintas felt that they need to look at the access driveway again.

MOTION: Mr. Kennedy moved to close the public hearing. Mr. Schoeneberger seconded the motion, and all members voted in favor.

The public hearing was closed at 8:45 P.M.

I certify these minutes were adopted on the following date:

_____ _____

Date Eric Prause, Chairman

NOTICE: A DIGITAL RECORDING OF THIS PUBLIC HEARING CAN BE HEARD IN THE PLANNING DEPARTMENT.

DRAFT

TOWN OF MANCHESTER
MINUTES OF BUSINESS MEETING
HELD BY THE PLANNING AND ZONING COMMISSION
JANUARY 6, 2025

MEMBERS PRESENT:

In Person:	Eric Prause, Chairperson
	Patrick Kennedy, Vice Chairperson
	Daniela Luna, Secretary
	Michael Stebe
	Chris Schoeneberger
	Michael Farina

ALTERNATE MEMBERS SITTING:

Electronically:	Sara Van Buren

ALTERNATES PRESENT:

In Person:	Maliha Ahsan

ABSENT:

Teresa Ike
Zachary Schurin

ALSO PRESENT:

In Person:	Megan Pilla, Principal Development Planner
	Gary Anderson, Director of Planning and Economic Development
	David Laiuppa, Environmental Planner/Wetlands Agent
Electronically:	Nancy Martel, Recording Secretary

The Chairman opened the Business Meeting at 8:45 P.M.

STEPHEN GIUDICE ***(continued from December 9, 2024)*** – Request a special exception under Art. II, Sec. 24.02.01(h) for a proposed autobody repair facility at 130R Spencer Street. – Special Exception (PSE-0018-2024) ***(Request to continue to February 3, 2025)***

Special Exception (PSE-0018-2024)

MOTION: Mr. Kennedy moved to continue the public hearing to February 3, 2025. Mr. Farina seconded the motion, and all members voted in favor.

STEPHEN GIUDICE – Request a special exception under Art. II, Sec. 24.02.01(c) for a proposed retail and self-storage facility at 53, 71, 77, 89, 89A, 99, and 113 Spencer Street. – Special Exception (PSE-0015-2024); Erosion & Sedimentation Control Plan (ESC-0006-2024)Special Exception (PSE-0015-2024)

Special Exception (PSE-0015-2024)

MOTION: Mr. Kennedy moved to approve the special exception under Art. II, Sec. 24.02.01(c) for a proposed retail and self-storage facility at 53, 71, 77, 89, 89A, 99, and 113 Spencer Street, with the modifications as specified in a staff memorandum from Megan Pilla, Principal Development Planner, dated January 6, 2025. Mr. Schoeneberger seconded the motion, and all members voted in favor.

The reason for the approval is that the proposed activity meets the special exception criteria in Article IV, Section 20.

Mr. Stebe stated that the Commission may want to consider what the entryway into Manchester should look like. He acknowledged that the proposal meets the criteria, though in his opinion it does not meet the POCD recommendation of building a robust entry into Manchester. He commented that this will be built because of a lack of planning by the Commission.

Mr. Farina stated that he would rather have something else at the entry to the community, but it is incumbent upon the Commission to plan better and perhaps strike storage facilities as a special exception use. He felt that this facility is attractive and has no reservation about supporting it.

Mr. Prause concurred that it is a suitable use for the location. It is a use that is congruent with the adjoining use. The scale of the structure is larger than many properties on Spencer Street, but it meets a market need. It is very encouraging to hear of a business that wants to grow in town. He commented on the history of the roadway.

Erosion & Sedimentation Control Plan (ESC-0006-2024)

MOTION: Mr. Kennedy moved to certify the erosion and sedimentation control plan for construction of a proposed retail and self-storage facility at 53, 71, 77, 89, 89A, 99, and 113 Spencer Street, with the modifications as specified in a staff memorandum from Megan Pilla, Principal Development Planner, dated January 6, 2025. Mr. Schoeneberger seconded the motion, and all members voted in favor.

ADMINISTRATIVE REPORTS

Ms. Pilla reported that there are currently no new training opportunities. She reminded the members of the upcoming March training.

Prior to the next meeting on January 22, there will be a workshop with the Downtown Manchester Special Services District Board of Commissioners at 5:30 P.M.

Mr. Laiuppa reported that an administrative approval was made for the extension of sidewalks and replacement of catch basins within the upland review area adjacent to Charter Oak Street between Virginia Road and Autumn Street.

Mr. Stebe, noting that there was an application recently, asked whether this is an additional piece.

Ms. Pilla remarked that, at the time of the recent application, the members were made aware that there would be an inland wetlands permit to go along with it.

Mr. Laiuppa clarified that, typically, when there is an administrative approval for an application that has other elements, it is approved on or after the day of the approval of the other elements.

Mr. Farina stated that he went over the Manchester charter for the Special Services District and they have no say over zoning.

Mr. Anderson confirmed that they have no formal authority in zoning. They have been involved in the past in the downtown design guidelines.

APPROVAL OF MINUTES

December 9, 2024 – Public Hearing/Business Meeting

MOTION: Mr. Farina moved to approve the minutes as written. Mr. Kennedy seconded the motion, and all members voted in favor.

RECEIPT OF NEW APPLICATIONS

1. **PB PROJECTS 12 LLC** – Special Exception (PSE-0019-2024) – Request a special exception under Art. II, Sec. 1.00.03 to convert Nathan Hale School into multifamily housing with 41 residential units at 160 Spruce Street.

ITEMS FOR FUTURE AGENDAS

Mr. Farina stated that he has noticed that applicants' expert witnesses always agree with the applicant. He suggested that there may be times when the Commission would like a third-party expert that may be more objective. He questioned the process for that. The Town could hire an expert because, at times, it seems incumbent upon the Commission to do so.

Ms. Pilla reported that there is no process set in stone because it has not been done in her time with the Town. The Planning Department would need to consider the logistics, cost and how it would be paid for. There is a statute that allows, by regulation, an applicant to pay for a third-party review, but that must be put in the regulations. It must be determined how the Town would pay for it.

Mr. Anderson remarked that there are experts on staff. If the Commission wants information outside of staff's expertise, the Planning Department can figure out a way to accommodate that if there is a specific topic.

Mr. Farina felt that there should be a process in place. Obviously, the applicant paying for it would be in the taxpayers' favor.

Mr. Kennedy reported that it was done once when he was on the Commission in South Windsor. It was done on an ad hoc basis and the town paid for it. For the most part, there is enough expertise on staff, and for anything controversial, someone else hires an expert to testify.

Mr. Prause commented that the Town is fortunate to have a staff of experts. The trouble becomes finding an expert that is willing to study something that another expert has testified to.

Mr. Kennedy expressed the opinion that the Commission could consider this if such a situation arises.

Mr. Stebe sought clarification that the options are currently limited to the Town paying or using current resources. He assumed that the Commission cannot ask an applicant to hire an expert without it being in the regulations. Mr. Stebe stated that, since the regulations are being revamped, the Commission should explore adding that into the regulations as an option.

MOTION: Mr. Kennedy moved to close the business meeting. Mr. Farina seconded the motion, and all members voted in favor.

The Business Meeting was closed at 9:15 P.M.

I certify these minutes were adopted on the following date:

_____ _____

Date Eric Prause, Chairman

NOTICE: A DIGITAL RECORDING OF THIS BUSINESS MEETING CAN BE HEARD IN THE PLANNING DEPARTMENT.

DRAFT

TOWN OF MANCHESTER
MINUTES OF AQUIFER PROTECTION AGENCY MEETING
JANUARY 6, 2025

MEMBERS PRESENT:

In Person:	Eric Prause, Chairperson
	Patrick Kennedy, Vice Chairperson
	Daniela Luna, Secretary
	Michael Stebe
	Chris Schoeneberger
	Michael Farina

ALTERNATE MEMBERS SITTING:

Electronically:	Sara Van Buren

ALTERNATES PRESENT:

In Person:	Maliha Ahsan

ABSENT:

Teresa Ike
Zachary Schurin

ALSO PRESENT:

In Person:	Megan Pilla, Principal Development Planner
	Gary Anderson, Director of Planning and Economic Development
	David Laiuppa, Environmental Planner/Wetlands Agent
Electronically:	Nancy Martel, Recording Secretary

The Chairman opened the Aquifer Protection Agency Meeting at 9:15 P.M.

WILLIAM BOGNER
405 New State Road
APA #023 – Transfer Request

Mr. Laiuppa explained that this is a transfer of registration from Edward and Diane Lazarin to William Bogner for the property at 405 New State Road. The registered use is the same. Aquifer Protection regulations do not allow new uses, only the transfer of existing uses or elimination of existing uses.

APA #023 – Transfer Request
MOTION: Mr. Kennedy moved to approve the request to transfer the Aquifer Protection Area Registration at 405 New State Road from Edward & Diane Lazarin to William Bogner as outlined in the Transfer Request form that has been submitted

to the Aquifer Protection Agency on December 17, 2024. Mr. Farina seconded the motion, and all members voted in favor.

The reason for the approval is that the Transfer Form is complete, and the Registrant has certified that the facility remains in compliance with all the best management practices set forth in Section 12 of the Regulations.

MOTION: Mr. Kennedy moved to close the Aquifer Protection Agency Meeting. Mr. Schoeneberger seconded the motion, and all members voted in favor.

The Aquifer Protection Agency Meeting was closed at 9:20 P.M.

I certify these minutes were adopted on the following date:

_____ _____

Date Eric Prause, Chairman

NOTICE: A DIGITAL RECORDING OF THIS BUSINESS MEETING CAN BE HEARD IN THE PLANNING DEPARTMENT.