

Aurele Gorneau, II
Project Manager
MaineDOT – Multimodal Program
16 State House Station, Child Street
Augusta, Maine 04333



September 12, 2014

Dear Aurele,

We are pleased to submit the Draft Preliminary Design Report and Preliminary Plans for the Department's review and comment. The yellow highlighted areas within the PDR document represent areas where input is required before the document is finalized. The plans include the review comments received through 9/10/14 with the exception of those comments deemed final design related.

Of particular note is the estimated project cost which takes into account numerous geometry and layout modifications made since the project inception. Including estimated placeholder values (highlighted for further review) the project is \$185,000 over the budgeted Workplan estimate of \$1,498,751. Two items, right-of-way and Railroad efforts, require a critical review since these items have a combined placeholder estimate of \$200,000. The preliminary engineering cost also requires review and updates to include MaineDOT's costs. The following are additional areas impacting the overall cost that warrant additional consideration as we move into final design:

- The amount of sidewalk reconstruction. The project estimate includes a complete sidewalk reconstruction. However, a few segments of existing sidewalk were recently rehabilitated or reconstructed and could be eliminated from the project. This could amount to about a \$30,000 to \$50,000 savings. A coordination meeting with the City is recommended.
- The amount of streetscaping elements. Given the project geometry and layout has been modified significantly since the project kick-off and just recently been approved for Public Meeting, as well as not yet knowing the City's planned streetscape themes, we have developed a conservative (30% high) estimate for these elements including street trees, plantings, benches, bike racks, receptacles, etc. This could amount to about a \$50,000 to 75,000 savings.

- The unit costs. The unit costs contained in the worksheet are based on recent projects we are aware of. We request the Department's review of these unit costs based on the latest MaineDOT costs for similar urban projects in the Portland area. Upon receipt of your comments, we can revise our worksheet and the budget within the PDR document.

Once you have received input on these areas, please let us know when would be the most appropriate time to update the PDR document and we can do so accordingly. Please call with any questions you or your team may have. We look forward to your input, the upcoming Public Hearing, and moving into final design.

Sincerely,

A handwritten signature in blue ink that reads "Dale Mitchell". The signature is written in a cursive style with a large initial "D".

Dale A. Mitchell, P.E.
Senior Project Manager
HNTB Corporation

enclosure

MaineDOT - HIGHWAY PRELIMINARY DESIGN REPORT

Project Name: *Portland, Woodfords Corner*

WIN: 20543

Final Distribution Date:

Town(s): Portland		Route(s): 302 – Forest Avenue	
WIN: 20543		Federal Project No: STP-2054(300)	
Project Type: Pedestrian/Bicycle/Intersection Improvements			
Project Location: Woodfords Corner			
Length: 0.430	BRLM:	ERLM:	RLM Date:
Program: Multimodal		Program Manager: Jeff Tweedie	
Project Manager: Aurele Gorneau, II		Designer: Dale A. Mitchell	
FHWA Oversight: Yes		Engineer of Record: HNTB	

PLANNING

Project History: The project was developed through the PACTS MPO process at the request of the City of Portland. A number of conceptual level planning studies have been completed with the most recent titled Transforming Forest Avenue in June 2011. This study along with team meetings form the basis of the design scope of work.

Purpose & Need: The project purpose is to improve levels of service for the pedestrian and bicycling modes of transportation while simultaneously providing a more balanced level of service for all users including vehicle and transit users.

Brief Summary of Proposed Scope of Work: The project includes: travel lane re-designations, intersection geometry improvements, lane and shoulder width modifications, continuation of bicycle lanes, improvement to bus stops, sidewalk and streetscape improvements, traffic signal timing improvements, improved traffic signing, and the creation of multiple human-scale areas. The City of Portland will be providing the branding and way-finding elements for inclusion within the overall contract plans.

Scope Changes: Traffic movements (lane designations), lane and shoulder widths, bicycle lane locations, bus stop locations, right-of-way impacts, lane striping extensions beyond project limits, and on-street parking locations have all been modified from the planning level scope of work. While each of these may only carry minimal effort, the combined effects are most noticeable on the project schedule. At this writing it is still unclear whether the City will support the removal of on-street parking along Forest Ave. between Woodfords and Ocean.

TRAFFIC

	Section 1	Section 2	Section 3	Section 4
Corridor Priority	1			
Functional Class	Other Prin. Arterial			
NHS/Non-NHS	NHS			
Posted Speed	30			
Design Speed	30			

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2011 AADT (Current)	21,200			
2035 AADT (Design)	24,700			
DHV	???			
CRF (Critical Rate Factor) 2010 – 2012: <1.0				
High Crash Locations: none				

DESIGN (Attach Highway Design Requirements Form) (The attached documents include HNTB's request for MaineDOT review and guidance and Meeting summary notes regarding design criteria. A final design document has not been approved in writing however it has been verbally; see Other Design Issues at the end of this document.)

Typical Section

	Section 1	Section 2	Section 3	Section 4
Travel Lane Width	11'			
Shoulder Width	2'			
Front Slope	flatter than 4:1			
Back Slope	n/a			
Guardrail Slope	n/a			
Clear Zone	Match Existing- 1.5' Lat. Off.			

Pavement Structure

Pavement Structure Analysis Results – Not complete as of 9/12/14; placeholder values shown for Qty. Est.

Layers	DarWIN Design		Pavement ME Design	
	Thickness	Type	Thickness	Type
Hot Mix Asphalt Pavement	6 inch	12.5 & 19		
Recycled Layer				
Base Course Gravel	6 inch	B		
Subbase Course Gravel	18 inch	D		
Shoulder Pavement	6 inch	12.5 & 19		

Pavement Design Coachpoint Date:

Final Pavement Structure Design

Design Method		
Layers	Thickness	Type
Hot Mix Asphalt Pavement		
Recycled Layer		
Base Course Gravel		
Subbase Course Gravel		
Shoulder Pavement		

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Note: If the final pavement structure design is different from both the DarWIN and Pavement ME designs, provide comments below.

Comments:

Pedestrian/Bicycle Accommodations

Summary of Pedestrian & Bicycle Accommodations: Bicycles will be accommodated through a combination of shared lane and dedicated bicycle lane. The southerly end of the project matches existing with a shared use bike lane in both the northbound and southbound directions. Shared use transitions to dedicated bicycle lanes north of Ocean Avenue for both northbound and southbound directions. Southbound bicycle traffic will be routed from Forest Avenue to Deering to Revere and back onto Forest vs. forcing them to move into the far left lane at the Forest/Woodford intersection due to the right lane proceeding onto Deering.

Pedestrians improvements will be made including intersection geometry changes that decrease crosswalk lengths, the addition of pedestrian scale nodes at the projects intersections, and streetscape amenities installed along the project corridor (street trees, flower/shrubs, benches, bike racks, trash receptacles, and way-finding). Transit improvements are also proposed through the inclusion of a bus shelter southbound between Deering and Revere along Forest, and a relocated bus stop for northbound buses between Woodford and Vannah.

ADA Compliance

Existing and Proposed Facilities

	Existing	Compliant (Y/N)	Upgrades Proposed (Y/N)	Proposed	Compliant (Y/N)
Sidewalks					
Width	6' to 12'	Y; spot locations =N	Y	6' to 12'	Y
Cross-slope	2% to approx. 6%	Y	Y	2% to 4%	Y
Ramps (Crosswalk)					
Width	8'	Y	Y	8'	Y
Slope	4% or flatter	Y	N	4% or flatter	Y
Detectable Warnings	some	some	Y	Y	Y
Ramps (Entrance)					
Width	4' to 8'	some Y & N	Y	6' min	Y
Slope	vert. to 12:1	some Y, some N	Y	12:1 max	Y
Pedestrian Signals					
(Y/N)	Y	Y	Y	Y	Y

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Non-Compliant facilities shall be upgraded according to the guidelines set forth in the most recent MaineDOT ADA Compliance Policy. If a facility cannot be upgraded to full compliance due to technical infeasibility, the facility shall be upgraded to the maximum extent feasible. Technical infeasibility refers to physical or structural limitations. Upgrades cannot be considered technically infeasible solely on the basis of cost. If facilities cannot be upgraded to full compliance according to the Policy, a Design Exception must be requested.

Summary of measures taken to upgrade non-compliant facilities: Some sidewalk locations are narrow or made narrow by poles or similar. Sidewalks will be widened in as many locations as possible including providing for at least minimum clearances. Narrow crosswalk ramp entrances will also be widened. Some ramp entrances are vertical curbs with no detectable warnings. These will be removed and replaced with appropriate slopes and detectable warnings. In numerous locations throughout the project the existing sidewalks are breaking up, bumpy, and in otherwise poor condition. A new sidewalk surface is proposed to include appropriate tie-ins to drives, ramps, cross walks, etc.

Design Exceptions

Controlling Element	Required Standard	Proposed Design	Date Approved
Lane Width	12'	11'	To be finalized based on site meeting 6/10/14
Shoulder Width	4' to 10'	2'	To be finalized based on site meeting 6/10/14
ADA Exceptions (Yes or No):			N
Driveway Exceptions (Yes or No):			N

ENVIRONMENTAL PERMITS / ISSUES

Team Member: Kristin Chamberlin

NEPA (4F, 6F, sect. 106):		In-Stream Work-Window:	
MHPC Signoff:		Wetland Mitigation:	
MHPC Mitigation:		Public Lands:	
DEP:		Ch. 500 – Stormwater/MS4:	
ACOE:		Endangered Species:	
Fish Passage:		Soil Contamination:	
Watershed:		Other:	

Avoidance & Minimization:

RIGHT-OF-WAY COORDINATION

Team Member: Andrew Johnson

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	Section 1	Section 2	Section 3	Section 4
Total Existing Width:				
Total Proposed Width:				
# of Abutters:				
# of Acquisitions:				
# of Relocations:				
Reserved Areas:				
Building Availability:				

UTILITY IMPACTS/ISSUES

Team Member: Rick Paraschak

Above Ground Utilities: Potential aerial conflicts with sign and signal mast arms. Potential aerial conflicts with relocation of R/R crossing gates. ROW takes for utilities will apply

Below Ground Utilities: Potential underground conflicts with foundations for sign and signal foundations. Potential underground conflicts with relocation of R/R crossing gates.

	Necessary for this Project? (Yes or No)	Coordination Still Needed? (Yes or No)
Pole List:	Yes	Yes
Utility Agreements:	Yes	Yes
RR PRTS:	Yes	Yes
Railroad Agreement:	Yes	Yes

ROW issues related to utilities: Yes, and they could be complicated - railroad

GEOTECHNICAL COORDINATION

Team Member: Kitty Breskin

Field Analysis:

Preliminary Recommendations:

PUBLIC PROCESS

Proposed Public Contact Method and Date(s): Public/Stakeholder meeting held April 9, 2014; Formal Public Hearing scheduled for 9/29/14

Concerns Identified at Preliminary Public Meeting:

- Crosswalks should be well lighted,

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- Removal of existing on-street parking along Forest between Woodfords and Ocean will be problematic for local businesses,
- Two lanes should be extended northbound beyond Ocean Avenue to beyond Pleasant Street. A merge prior to Pleasant will likely only create backups at the Ocean intersection,
- Some type of advanced signing or other visual cue is needed for southbound traffic approaching the Forest/Woodford intersection due to each lane is for a dedicated movement.
- The Deering bus stop should be relocated to Forest Ave between Deering and Revere. In-line bus stops are preferred however they will interrupt traffic flow,
- Surface treatment of the sidewalk should be thoroughly investigated during final design,
- Bicycle lanes crossing the R/R should be reviewed in more detail; how wide of a lane do you need to cross the R/R at a safe angle without riding into the travel lane.

Municipal Agreement:

M&O ISSUES /CONCERNS

CONSTRUCTION SCHEDULE

PS&E Date	
Advertise Date	
Construction Begin Date	
Construction Complete	

TAME RESULTS (*Transfer results from returned Tame Request Form*)

Morning Restrictions	
Evening Restrictions	
Maximum Closure Length	
Minimum Lane Width	

Additional Comments:

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Final Distribution Date:

BUDGET

	Programmed	Available	PDR Estimate
Date	14-16 Workplan		9/12/14
Preliminary Engineering			\$129,750 + MDOT
Right of Way			\$50,000
Construction			\$1,230,000
Construction Engineering			est \$123,000
Other: RR Eng, Insp, Const			est \$150,000
TOTAL	\$1,498,751		\$1,682,750
Total Cost per Mile:			
Funding Strategy (Sources):			

SUMMARY OF PRELIMINARY ENGINEERING

Existing and Proposed Design Elements (*including variances from design standards*)

Horizontal Alignment: The horizontal alignment is not proposed to be changed. New lane assignments do however create a flatter horizontal curve southbound on Forest at the Woodford/Deering intersection. Design truck templates have been run through this and other locations to evaluate curblines and encroachments. New lane striping is proposed for Forest Avenue north of Ocean to extend two lanes northbound. This requires new lane alignments but the work is being done within the existing curblines.

Vertical Alignment: The vertical alignment is not proposed to be changed.

Typical Section: The typical section essentially consists of minor curb/gutter line relocation and a mill and overlay within the project limits. In one other location, a median island is being relocated due to lane designations.

Pavement Structure: A pavement design is needed before moving into final design. It is assumed at 6 inches HMA over 24 inches aggregate. Proposed structure will be to match existing.

Drainage/Hydrology: There is no newly proposed impervious area and therefore a formal drainage/hydrology study was not warranted (or scoped). Minor localized review of catch basin collection is anticipated during final design for those areas where the curb/gutter line is to be moved.

Guardrail: There are no guardrail improvements planned for this project.

Intersection Geometry: The intersection of Forest at Deering/Woodfords is being modified to provide three lanes northbound (two thru and a left turn lane) and a single lane southbound. This arrangement forces the relocation of a median island and the relocation of curbs. The north side of the intersection is being modified to eliminate on-street parking northbound in favor of two thru lanes versus one. These modifications allow for the curblines to be moved inward providing for wider sidewalks. The Ocean/Vannah/Saunders intersection with Forest is being modified on the north side to provide for two northbound lanes and dedicated bicycle lanes in both directions. These modifications require the curblines to be moved outward creating right-of-way impacts.

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Right-of-Way: Impacts are estimated for properties at approximately 23+50 left, 24+20 left, 25+50 left, 26+50 left, 19+70 right, 24+70 right, 26+00 right, and 27+70 right. The remainder of the project is to be completed within the existing right-of-way.

Utilities: Utility coordination is required a number of items including: for curb relocations where catch basins need adjustments; for the installation of new signing mast arm foundations; for aerial utilities in the vicinity of the signing mast arms; and for coordination with the Railroad for widening due to roadway, bicycles, and sidewalks. The existing crossing gates will be impacted..

Other Design Issues:

A site visit was held on June 10, 2014 between the MaineDOT, the City of Portland and HNTB. The meeting purpose was to discuss design criteria and potential Design Exceptions required for the project. The three items with a major focus was 1) travel lane widths, 2) shoulder widths, and 3) removing on-street parking in favor of a second lane northbound on Forest Avenue between Woodfords and Ocean. The concensus of the meeting was that 11 foot travel lanes, and 2 foot shoulders would be allowed. The City staff favored removing on-street parking however they could not commit to the MaineDOT that it could be removed. Another area of discussion was extending two lanes northbound from the Forest/Ocean intersection. MaineDOT agreed that right-of-way impacts would be acceptable up to the R/R but that further lane extensions should be accomplished only if they could be done within the existing curbline.

DRAFT PDR DISTRIBUTION TEAM COMMENTS AND RESPONSE

Comments:

Comment Deadline	Date:
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PRELIMINARY APPROVAL

Approved for Public Meeting		Date:
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Project Name: *Portland, Woodfords Corner*

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Final Distribution Date:

PUBLIC PARTICIPATION COMMENTS AND RESPONSE

Comments:

ADDITIONAL TEAM COMMENTS AND RESPONSE

Comments:

Comment Deadline	Date:
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FINAL APPROVAL

Public Participation Complete		Date:
Approved for Final Design		Date:

Date
3/12/2014

To
Aurele Gorneau, II



From
Dale Mitchell

**PROJECT
CORRESPONDENCE**

Subject
Woodfords Corner Design Criteria &
Design Exception Guidance Request
WIN 20543

Attached is the completed Highway Design Requirements work sheet documenting our understanding of the project's design criteria. In addition, there are four criteria that may require a Design Exception. Could you please coordinate its review and provide the Department's approval and/or guidance on any changes to the Proposed Standards? Please advise of your findings and we will prepare the necessary DE documentation accordingly. Here are a few additional backup comments for your consideration.

1. The project is scoped to implement a Complete Streets design to the Woodfords Corner area (adopted by the City of Portland); that is, to more actively accommodate all modes of transportation even if that means some reduction in the Level of Service for vehicles to improve that of other modes.
2. Planning studies concluded that lane widths be reduced and lane arrangements be modified including:
 - a. Outside lanes maintained at a 12' width with pavement markings to indicate a shared use vehicle/bicycle lane.
 - b. Shoulders should be eliminated completely (bikes now share the lane)
 - c. Inside lanes, both thru and left turn, reduced in width to 10 feet,
 - d. and curbs be moved to widen sidewalks if possible.
3. The project is scoped to minimize pavement disturbance by addressing the relocation of curbs to accommodate new lane widths; essentially a Rehabilitation/Spot Improvement scope. This in turn means many highway design variables are listed as "Match Existing". Following are two additional notable criteria for review.
 - a. Minimum Radius: The existing curve through the Woodford intersection has a radius equal to 200 feet. The minimum radius equals 230 feet. Although the existing is less than minimum, it is at a signal controlled intersection and we do not propose changes.
 - b. Clear Zone: The required clear zone is 12 feet with a minimum lateral offset of 1.5 feet. This is an urban setting with sidewalks immediately adjacent to the curb. Within the sidewalks there are utility poles, traffic signal cabinets and poles, trees, and other street furniture. Some existing on-street parking will be removed at one end of the project. In many cases the existing buildings are near or within the 12 foot clear zone. We do not propose changes that will remove existing obstacles within the clear zone and in fact the Scope calls for the addition of more streetscape elements (within the clear zone) including trees, benches, signs, trash receptacles, bus shelter, and bicycle racks. These items will be used to help create small gathering areas and a more human scale environment.

Based on this and the information provided on the Highway Design Requirements worksheet, these are the four design criteria that may potentially require Design Exceptions or PM approval:

- a. Lane Width
- b. Shoulder Width
- c. Minimum Radius
- d. Clear Zone

HIGHWAY DESIGN REQUIREMENTS

Project Name: Woodfords Corner

WIN: 20543

PROJECT DATA

Section: 1

Town(s):	<u>Portland</u>	Route(s):	<u>302/100</u>
WIN:	<u>20543</u>	Federal Project No:	
Project Location:	<u>Woodfords Corner - Forest Avenue</u>		
Program Manager:	<u>Jeff Tweedie</u>	Designer:	<u>Dale Mitchell</u>
Project Manager:	<u>Aurele Gorman</u>	Engineer of Record:	<u>HWTB</u>
Corridor Priority (1-6):	<u>Priority 1</u>	Posted Speed:	<u>30 mph</u>
NHS/non-NHS:	<u>NHS</u>	Design Life:	
Functional Class:	<u>Other Principal Arterial</u>	20XX AADT (Current):	<u>2011 = 21,200</u>
		20XX AADT (Design):	<u>2035 = 24,700</u>
Scope (choices below):	<u>Rehab / Spot Improvement</u>		
(New Construction, Reconstruction, Rehabilitation, Restoration/Resurfacing, 4R Freeway, Spot Improvement)			

DESIGN CRITERIA

Controlling Elements	Complete before Design Proceeds		Complete before Horizontal/Vertical Alignment Review	
	Required Standard	Reference	Proposed Standard	Design Exception
Design Speed	<u>30 Posted</u>	<u>E1-C11</u>	<u>ME - 30mph</u>	<u>N</u>
*Lane Width	<u>12' w/ 11'-12' stripe</u>	<u>E1-C2</u>	<u>10', 11', and 12'</u>	<u>Y</u>
*Shoulder Width	<u>4'-10'</u>	<u>E1-C2</u>	<u>0</u>	<u>Y</u>
Cross Slope (Travelway)	<u>1/2-1% from existing</u>	<u>E1-C13</u>	<u>ME ≈ 2-4%</u>	<u>N</u>
Minimum Radius	<u>230' (Low Speed Urban)</u>	<u>MHOG Tbl 5-9</u>	<u>ME ≈ 200' (2)</u>	<u>Y</u>
Superelevation (emax)	<u>4%</u>	<u>MHOG Tbl 5-9</u>	<u>ME ≈ 4% (1)</u>	<u>N</u>
Stopping Sight Distance	<u>200'</u>	<u>MHOG Tbl 4-1</u>	<u>ME ≈ 200' (1, 2)</u>	<u>N</u>
Maximum Grade (%)	<u>8% (Level)</u>	<u>MHOG Tbl 11-5</u>	<u>ME ≈ 4% (1)</u>	<u>N</u>
Vertical Clearance	<u>N/A no Under/Overpass</u>	<u>Maine Std Det. 643</u>	<u>Signs & Signals = 160'</u>	<u>N</u>
Non-Controlling Elements				
Clear Zone	<u>12' / 1.5' (3)</u>	<u>E1-C2.1 / AOG^{Sec 10.14}</u>	<u>ME - 1.5' L to off</u>	<u>Y</u>
Side Slopes	<u>4:1 or flatter</u>	<u>E1-C2.1</u>	<u>ME - curb at urban</u>	<u>N</u>

*Check for any corridor requirements and/or history that may govern widths.

ME = Match Existing

COMMENTS – Provide any comments necessary to clarify information presented above.

- (1) - Roadway profile will not change; roadway improvements limited to moving curblines and adjusting overall curb-to-curb width.
- (2) - Roadway horizontal alignment will not change except for minor lane striping for pockets.
- (3) - Project is curbed urban with proposal of moving curb to widen shoulders. The sidewalks and associated streetscape elements can't be moved out of the clear zone based on the City's desire to create a 'Complete Street' setting.

Portland Forest Ave Woodfords Corner Project

Meeting Bullet Notes

6/10/14

Dale Mitchell, HNTB, Portland: Mike Bobinsky, Alex Jaegerman, Jeff Levine, Bruce Hyman, Jeremiah Bartlett, PACTS: Paul Niehoff, MaineDOT: Joyce Taylor, Herb Thomson, Steve Landry, Aurele Gorneau, Dan Stewart

Meeting Note Items:

1. Move stop bar back for left turn lane on Forest Ave, westbound onto Woodfords to allow room for inbound trucks. Show trucks can make the inbound movement with relocated stop bar and/or modified median and curb layout.
2. Remove 2nd lane from Forest Ave eastbound (inbound) between Revere and Woodfords streets. Possibly to allow bus stop at intersection of Revere so the bus does not have to pull into traffic. This will also allow the median to be moved to increase the length of left turn storage for the outbound movement.
3. Potentially close right turn from eastbound Forest Ave to Woodfords, just before intersection. Improve pedestrian refuge. Would require advance signage notifying traffic of this no right on Woodford's.
4. Overhead signage both directions for improved lane directional signage.
5. Keep bike lane and pedestrian sidewalk separated in some way at railroad tracks. Bikes should not be led into pedestrian conflict area. Right of way already needed, but additional right of way may or may not be needed.
6. Remove sharrow eastbound Forest Ave just after Woodfords before Revere. The sharrow lane should continue down Deering from Forest then left onto Revere which would put cyclist back onto Forest.
7. Add bus pull out area eastbound Forest Ave before Revere potentially.
8. 10 ft lanes on left turn lanes are okay if there is no conflict with truck turning radius geometry.
9. Alternate merge lanes westbound Forest Ave after Ocean Ave. intersection, around the RR crossing. Include both signage and pavement markings to reinforce desired merge operation.
10. No left turn on Vannah improvement...perhaps a signal head prohibition (Blank out sign). Improved sign location/visibility is needed for this peak a.m. and p.m. prohibition.
11. City suggested extending the two lanes further westbound after tracks potentially even if it meant removing existing on-street parking (not used much). This would be researched to be

sure there was enough curb-to-curb width to accommodate. This will likely require the painted centerline to be shifted creating a single lane inbound and double lane outbound.

12. Improved left turn lane markings east on Forest Ave at approach to Woodfords.
13. 2 - 11 foot travel lanes and 2 foot shoulders with Sharrow markings in the outside lane (in the area that parking is going to be removed), is acceptable.
14. Wider sidewalks are a goal but not in areas that would reduce lane or shoulder widths beyond that agreed to.
15. The City needs to go through the council for the removal of the on-street parking between Woodford St. and Vannah Ave. to maintain two outbound lanes.

Woodfords Corner

Portland, Maine

WIN# 20543

Preliminary Engineer's Estimate

Last Revised: September, 09, 2014

ITEM NO.	ITEM DESCRIPTION	UNIT	Structural Quantity	Civil Quantity	Total QUANTITY	UNIT PRICE	CONTRACT TOTAL
202.127	Removal of Existing Pavement Surface - Sidewalk	SY		3,511	3,511	\$ 17.50	\$ 61,442.50
202.128	Removal of Existing Bituminous Pavement	SY		1,037	1,037	\$ 10.00	\$ 10,370.00
203.20	Common Excavation	CY		947	947	\$ 12.00	\$ 11,368.44
304.103	Aggregate Subbase Course - Gravel	CY		947	947	\$ 26.50	\$ 25,105.31
403.207	Hot Mix Asphalt, 12.5 mm Nominal Maximum Size, Surface	TON		1,013	1,013	\$ 110.00	\$ 111,392.60
403.208	Hot Mix Asphalt, 12.5 mm Nominal Maximum Size, Binder	TON		86	86	\$ 135.00	\$ 11,547.90
403.213	Hot Mix Asphalt, 19 mm Nominal Maximum Size, Base	TON		171	171	\$ 135.00	\$ 23,097.15
409.15	Bituminous Tack Coat, Applied	GAL		614	614	\$ 12.00	\$ 7,364.76
502.3412	Structural Concrete, Raised Island	CY		11	11	\$ 295.00	\$ 3,271.55
604.1800	Adjust Manhole or CB to Grade	EA		9	9	\$ 425.00	\$ 3,825.00
608.08	Reinforced Concrete Sidewalk	SY		3,511	3,511	\$ 75.00	\$ 263,333.25
608.26	Curb Ramp Detectable Warning Field	SF		176	176	\$ 59.50	\$ 10,472.00
609.11	Vertical Curb Type 1	LF		740	740	\$ 26.50	\$ 19,596.75
609.111	Vertical Curb Type 1 - Removed	LF		897	897	\$ 25.00	\$ 22,425.00
609.12	Vertical Curb Type 1 - Circular	LF		225	225	\$ 33.50	\$ 7,537.50
609.15	Sloped Curb Type 1	LF		401	401	\$ 55.00	\$ 22,055.00
609.15	Sloped Curb Type 1 - Circular	LF		10	10	\$ 78.00	\$ 741.00
609.237	Terminal Curb Type 1 - 7 Foot	EA		14	14	\$ 205.00	\$ 2,870.00
609.380	Reset Curb Type 1	LF		929	929	\$ 25.00	\$ 23,225.00
615.070	Loam	CY		570	570	\$ 50.00	\$ 28,500.00
618.13	Seeding Method Number 1, Plan Quantity	UN		1	1	\$ 27.00	\$ 27.00
619.12	Mulch, Plan Quantity	UN		2	2	\$ 15.00	\$ 30.00
626.32	24-Inch Dia Foundation	EA		6	6	\$ 1,000.00	\$ 6,000.00
626.332	30-Inch Dia., Greater than 8 ft Long , and all 36-Inch and 42-Inch Dia. Found.	CY		16	16	\$ 1,200.00	\$ 19,200.00
626.333	48-Inch Dia., 54-Inch Dia., 60-Inch Dia. Foundations	CY		20	20	\$ 1,700.00	\$ 34,000.00
627.618	12" Solid White Pavement Marking	LF		251	251	\$ 1.25	\$ 313.50
627.733	4" White or Yellow Painted Pavement Marking Line	LF		11,872	11,872	\$ 0.16	\$ 1,899.52
627.94	Preformed Thermoplastic Pavement Marking	SF		943	943	\$ 11.00	\$ 10,373.00
629.05	Hand Labor, Straight Time	HR		30	30	\$ 35.00	\$ 1,050.00
631.12	Mini All Purpose Excavator (incl operator)	HR		15	15	\$ 100.00	\$ 1,500.00
631.13	Skid Steer (incl operator)	HR		15	15	\$ 80.00	\$ 1,200.00
631.17	Truck-Small (incl operator)	HR		15	15	\$ 70.00	\$ 1,050.00
643.71	Traffic Signal Modification: Forest and Woodford	LS		1	1	\$ 10,000.00	\$ 10,000.00
643.71	Traffic Signal Modification: Forest and Ocean	LS		1	1	\$ 10,000.00	\$ 10,000.00
643.91	Mast Arm Pole with 50 Ft Mast Arm	EA		2	2	\$ 20,000.00	\$ 40,000.00
643.91	Mast Arm Pole with 40 Ft Mast Arm	EA		1	1	\$ 13,000.00	\$ 13,000.00
643.91	Mast Arm Pole with 25 Ft Mast Arm	EA		2	2	\$ 8,000.00	\$ 16,000.00
643.92	Pedestal Pole	EA		6	6	\$ 800.00	\$ 4,800.00
645.12	Overhead Guide Sign: (STA XX+XXX)	LS		1	1	\$ 2,000.00	\$ 2,000.00
645.271	Regulatory, Warning, Confirmation and Route Assembly Sign, Type I	SF		45	45	\$ 50.00	\$ 2,250.00
652.39	Work Zone Traffic Control	LS		1	1	\$ 50,000.00	\$ 50,000.00
621.xxx	Street Tree	EA		60	60	\$ 800.00	\$ 48,000.00
621.xxx	Shrubs/Ornamental Grasses/Groundcover	EA		500	500	\$ 30.00	\$ 15,000.00
8XX.xxx	Bench	EA		25	25	\$ 2,000.00	\$ 50,000.00
8XX.xxx	Trash Receptacle	EA		10	10	\$ 1,000.00	\$ 10,000.00
890.070	Bicycle Rack	EA		20	20	\$ 475.00	\$ 9,500.00
201.300	Tree Grate	EA		44	44	\$ 500.00	\$ 22,000.00
8XX.xxx	Cobblestones (Tree Pit)	SY		222	222	\$ 225.00	\$ 49,950.00
8XX.xxx	Planter (Low Wall)	LF		160	160	\$ 30.00	\$ 4,800.00
8XX.xxx	Flush Curb as Edge Restraint	LF		100	100	\$ 30.00	\$ 3,000.00
8XX.xxx	Wayfinding Signs (Supports only)	EA		20	20	\$ 500.00	\$ 10,000.00
659.100	Mobilization (est at 10%)	LS		1	1	\$ 111,648.37	\$ 111,648.37
8XX.xxx	R/R Coordination, Gates, Flaggers, Inspectors, Rail Treatment, etc.	LS		1	1	\$ 150,000.00	\$ 150,000.00

Subtotal	\$ 1,378,132.10
Contingency (0%)	\$ -
Total	\$ 1,378,132.10
Say ~	\$ 1,380,000

Note: RR Item shown here for total construction cost. PDR form has it separated out.