

Memorandum

DATE: April 17, 2025
TO: MPO TAC
FROM: David Walker, Assistant Director
RE: Ten Year Plan Process

Now that the MPO has completed the roughly 14 month process of establishing priorities for the next iteration of the State Ten Year Plan (RPC letter to NHDOT submitting 2027-2036 Ten Year Plan priorities attached), there is time to examine our work and find opportunities for improvement. The process includes two broad components; Project Solicitation and Project Selection with the solicitation component taking roughly the first three months, and the selection component the remaining time, including time for NHDOT scope and cost review. At the March meeting, TAC began a discussion of what aspects of the process worked well and what did not, and this conversation will continue over the next few months. Staff sought input from the MPO Policy Committee as well at the April 9, 2025 meeting.

One thing that may aid this process going forward is that the MPO is developing an online database and project tracking platform that will include all projects in the Long Range Transportation Plan and Transportation Improvement Program (TIP). This portal will allow us to process TIP project revisions, engage the public, have communities submit new projects directly, prioritize projects for the Ten Year Plan, and everything will be held in a unified database. Staff will demonstrate the project tracking platform at an upcoming meeting.

As the TAC only had a few minutes to discuss at the end of the last meeting only a few items were identified for options. Additionally, Tim Moore (Plaistow) sent a couple of scenarios that he put together with some options to modify the process. This, along with the questions discussed (and bullet pointed comments) at the March TAC meeting are attached as a starting point for the conversation.

To facilitate the discussion, there are four items attached to this memorandum:

- Discussion questions shared at the March TAC Meeting and initial responses
- RPC Project Solicitation/Selection Process overview flyer
- Tim Moore conceptual process scenarios
- RPC Ten Year Plan Priorities submittal letter to NHDOT

What went well?

| Project Solicitation | Project Selection |
|--|--|
| <ul style="list-style-type: none"> When TAC and Commissioners follow up with town officials on potential projects | <ul style="list-style-type: none"> |

What could have been done better?

| Project Solicitation | Project Selection |
|--|--|
| <ul style="list-style-type: none"> Is there a better way to engage town staff and officials, and get towns to think ahead 10-12 years on project needs Better highlight in communication to the town about the scale and time horizon for projects best suited to the TYP Start project solicitation earlier Make clear to communities that projects can be submitted any time for next round – don't need to wait until spring of even years Having completed SAP and CMP update will help identify needs for next round | <ul style="list-style-type: none"> Alter the review schedule so that NHDOT and Engineer review come back earlier to shape priorities. Start earlier. NHDOT review doubled project estimate late in game after we are locked in to just a few options Debrief between NHDOT and Consultant to understand why estimates diverged Clarity earlier on eligibility (e.g. Turnpike project not federally eligible) |

Are there any specific ideas for how we might do better next cycle?

| Project Solicitation | Project Selection |
|--|--|
| <ul style="list-style-type: none"> | <ul style="list-style-type: none"> |

Is it helpful to split the projects into three groups for prioritization (local, regional, inter-regional)?

| Project Selection |
|--|
| <ul style="list-style-type: none"> |

Are there any changes needed to the project selection criteria? (Economic Development, Accessibility and Equity, Mobility, Natural Hazard Resiliency, Network Significance, Safety, State of Repair, Local/Regional Support)

| Project Selection Criteria |
|--|
| <ul style="list-style-type: none"> |

Should we consider limiting the cost of projects considered for the Ten Year Plan to our budget target (currently \$8.055 million)?

| Project Cost Limitations |
|--|
| <ul style="list-style-type: none"> |

Transportation Planning and Project Selection Process

A blend of state and federal processes provide the transportation planning structure for New Hampshire. Metropolitan Planning Organizations (MPOs) must adopt project specific **Long Range Transportation Plans (LRTPs)** and short-range **Transportation Improvement Programs (TIPs)** as required by Federal regulations. The MPO also has a legislatively mandated role in establishing priority projects for the **State Ten Year Plan**, which weaves between the TIP and LRTP processes. These three documents provide the path for projects to move from idea (LRTP), through project development and planning (State Ten Year Plan), to implementation (TIP).

Long Range Transportation Plan (LRTP) [20+ year Horizon]

The Long Range Transportation Plan (LRTP) establishes goals, objectives and anticipated future conditions for surface transportation in the MPO region over twenty or more years. Transportation improvement needs are identified and prioritized for implementation. The highest priority projects are recommended to be included in the State Ten Year Plan (as per NH RSA 240:3). The LRTP is fully updated every four to five years and is available on the RPC website at therpc.org/LRTP.

State Ten Year Plan [10 Year Horizon]

The State Ten Year Plan is the list of funded transportation projects developed by NHDOT and Regional Planning Commissions (RPCs) as recommended by the Governor's Advisory Council on Intermodal Transportation (GACIT). The 9 RPCs provide NHDOT with priorities projects from their LRTPs, and NHDOT supplies identified operational, maintenance, and improvement needs to form the program of projects. The Ten Year Plan is updated on a two-year cycle and must be approved by the Legislature and the Governor prior to being enacted into law. Projects listed in the first four years of the Ten Year Plan that utilize federal funding become the basis of the TIP and State TIP (STIP).

Transportation Improvement Program (TIP) [4 Year Horizon]

The Transportation Improvement Program (TIP) is a four-year, short-range program of regional transportation projects scheduled for implementation in the region using federal funds. It is prepared by the MPO in cooperation with local governments, regional transit agencies, and the New Hampshire Department of Transportation (NHDOT). The TIP is the enactment of the LRTP vision, goals, and objectives, and the implementation of projects contained in the first four years of the State Ten Year Plan. The MPO TIP is available on the RPC website at therpc.org/TIP.

RPC Project Selection Process

The project selection process to establish priorities for the State Ten Year Plan is guided by a set of statewide project selection criteria and guidance from NHDOT. Each Planning Commission customizes the process within that guidance to suit regional needs and priorities. The RPC process begins with a request for project proposals from communities and regional planning partners in the summer of even numbered years and concludes with submitting priority projects to NHDOT in the Spring of odd numbered years. The graphics on the reverse of this handout provide an overview of that process. Full details are available on the RPC website at therpc.org/LRTP.

1 MPO Long Range Transportation Plan (LRTP)

2 State Ten Year Plan

3 MPO Transportation Improvement Program (TIP)

4 Year Short-Range Project List

- Near-term implementation
- Federally funded or Regionally Significant projects
- Fiscally constrained
- Regional TIPs combine to form State TIP (STIP)
- Updated every two years at conclusion of Ten Year Plan process

10 Year Statewide Queue of Projects

- State Commitment to build listed projects
- Fiscally constrained
- Regions provided funding targets
- New projects added to outer years & move to TIP when they reach year 4
- Updated every two years
- Federal and State funded projects

20+ Year Identified Project Needs

- Regional Policies and Goals
- Federally funded and Regionally Significant projects
- Short and long-term recommendations
- Fiscally constrained
- Projects prioritized for State Ten Year Plan
- Major updates every 4-5 years

RPC Project Solicitation and Selection Process

In the Spring of even numbered years the MPO solicits surface transportation projects from communities and agencies as possible additions to the Long Range Transportation Plan (LRTP). These new needs are combined with those already in the LRTP to form the project list that is the starting point for determining regional priorities for the State Ten Year Plan.

1 Project Solicitation

2 Project Evaluation

In the Summer of even numbered years all projects are assessed for eligibility for federal funding, general feasibility and are classified into one of three categories based on the scale of benefits (**local, regional, inter-regional**). Projects that are eligible for federal funding, generally feasible, have a defined scope and cost estimate move to step 3 while those that do not meet those basic thresholds are set aside for future consideration.

The Statewide Project Evaluation Criteria are given weights and the RPC utilizes these weights in Summer of even numbered years to score each remaining project against the criteria and establish relative priority. The current criteria assess project needs and impacts regarding:

- Economic Development & Goods Movement
- Equity, Accessibility, and Environmental Justice
- Mobility & Congestion
- Natural Hazards Resiliency
- Transportation Network Significance
- Safety for all users
- Infrastructure State of Repair
- Local and Regional Support

3 Project Selection Criteria

Local Safety, accessibility, and multi-modal connections within communities.

Regional Multi-modal connections between communities & regional activity centers.

Inter-Regional Mobility & intermodal improvements to ensure that the region is well connected to the rest of New Hampshire and the northeast.

4 Project Short List

Based on the scoring assessed in Step 3, the five top projects from each of the three categories are compiled by staff into a "short-list" that is presented to the Transportation Advisory Committee (TAC) for review and consideration mid-Summer of even numbered years. The TAC selects a subset of projects from the short-list for development of scope and cost estimates by RPC consulting engineers.

5 Ten Year Candidate Projects

Fall of even numbered years, the TAC reviews the scope and cost estimates & recommends, and the RPC Commissioners select, a sub-set of the short-listed projects as the RPC Candidate Projects for the Ten Year Plan. This list is financially constrained to the regional budget target (\$8.1 million) plus two additional projects, and information is assembled for each project to support the NHDOT review.

6 Scope and Cost Review

During the Winter of odd numbered years NHDOT reviews the RPC Candidate Projects and provides recommendations for revised cost estimates. The NHDOT review also addresses any design, scope, or other issues noted.

7 Ten Year Plan Priorities

In spring of odd numbered years, the RPC utilizes the feedback from NHDOT to constrain regional priorities to the budget target. NHDOT includes RPC final project recommendations in the draft Ten Year Plan to start the State approval process.



Go to therpc.org/transportation for more details.

Transportation Process (STIP/TIP, TYP, LRTP)

Scenarios for Process Change

Tim Moore

4/16/2025

Current process shortcomings:

1. So much time is spent on getting projects into the Ten-Year Plan (TYP) on a two-year cycle that not enough time is spent on project analysis (both feasibility and financial).
Proposed change: Modify the existing two-year cycle to a four-year cycle.
2. There are many programs that may be best fits for projects, but it is hard for municipalities to determine that best fit.
Proposed change: Introduce an “open enrollment” period as described in the “Submission Process” below.
3. The NHDOT “allocated” budget for each planning commission is insufficient but more importantly there is no way to place high-cost local/regional projects into the TYP.
Proposed Change: Work with the DOT to increase the allocated budget for planning commissions. See additional proposed changes in the Four-Year Scenario as described below.
4. Locally managed projects must conform to the Local Process Administration (LPA) process. The NHDOT provides LPA certified training for municipal employees but does not allow a municipality to hire a consulting firm to perform the LPA process on behalf of a municipality.
Proposed change: Work with the NHDOT to modify the LPA process so that a municipality may hire a consulting/engineering firm or a planning commission to perform the LPA process on behalf of the municipality.

Submission Process:

1. A municipality submits a project during the initial open enrollment period.
2. RPC staff reviews the submission and proposes a best-fit transportation program – CMAQ, TAP, HSIP, etc. The default and most common program would be the federal highway funds. Identify those programs that would require a local match and the amount of the local match.
3. The RPC staff confirms with the submitting municipality that the RPC proposed program selection is acceptable to the municipality. The confirmation would include the proposed program submission date and any required local match. The program selection may change should conditions change that would make a different program a better fit for the proposed project.
4. The program confirmation interval should take no more that two months starting from the submission date.

5. Although the process identifies a specific time-period for project submission, it would be the intent that project submission may occur at any time. Projects submitted after the initial open enrollment period may be postponed to the next fiscal year for consideration and analysis.

Conceptual Design Agreement Process:

1. The RPC staff further evaluates submitted projects including the scope of the project, a very high-level estimated cost of the project, and if necessary for large projects a phasing plan that would allow a large project to be completed phase by phase. Selection of a phase of a project does not guarantee that later phases of a project would be automatically selected in the future.
2. The TAC works with the RPC staff to create a prioritized project list that would be submitted to a NHDOT approved engineering firm for more detailed cost estimates.
3. The RPC staff, engineering firm, and the municipality meet to agree on the project scope, cost, and phasing of the project. **Side note example: The Plaistow North Ave/Main St project was selected to go forward with a proposed roundabout solution. However, it is not certain that Plaistow would find the roundabout solution acceptable. With the current process, this would not be discovered until the NHDOT begins the Preliminary Engineering phase of the project – well into the process and potentially introduces delays and cost increases for the project. With the municipal agreement up front in the process, delays and potential large cost increases should be avoided. This should also result in reduced PE cost and time.**

Large Local/Regional Project Process:

1. Work with NHDOT to identify those local and/or regional projects that have a cost of more than the allocated amount (RPC amount – approximately \$8,000,000) and include them in the list of state-funded projects).

TAC Final Prioritized Project Process:

1. At the completion of the Conceptual Design Agreement process the TAC would again work with the RPC staff to create a final prioritized project list that would be recommended to the MPO for approval and upon receiving MPO approval submitted to the NHDOT for inclusion in the TYP.

Legislative Process Approval:

1. In the fall of odd-numbered years the Governor's Advisory Council on Intermodal Transportation (GACIT) will sponsor public hearings throughout each of the five Executive Councilor districts.
2. In the Legislative Session following the GACIT hearings, the Legislature must approve the TYP and may approve it as submitted by the NHDOT or may amend it.
3. Ultimately the Governor must approve the Legislative-approved TYP.

Scenario # 1

Current Two-Year Process Timeline (based on State Fiscal Year July 1 through June 30):

1. Submission Process (Initial open enrollment period): Fiscal Year 1 – July through November.
2. Submission Process (remainder of process): Fiscal Year 1 - January
3. Conceptual Design Agreement Process: Fiscal Year 1 – February – April.
4. Large Local/Regional Project Process: Fiscal Year 1 - April
5. TAC Final Prioritized Project Process: Fiscal Year 1, May – Fiscal Year 2, September.
6. Legislative Process Approval: Fiscal Year 2 – October – June.

Scenario # 2

Proposed Four-Year Process Timeline (based on State Fiscal Year July 1 through June 30):

1. Submission Process:

Prior Fiscal Years – Projects with late submission dates from prior years shall be processed with projects submitted during Year 1 of the current fiscal year.

Fiscal Year 1 – July through Fiscal Year 2 - December.

Fiscal Year 2 – Depending on the scope and cost of projects submitted in Fiscal Year 2 may have delayed analysis and processing.

Fiscal Year 3 – Although any project may be submitted, only small projects will be considered during the current Four-Year Process. Large projects will be delayed until the first fiscal year of the next Four-Year cycle.

Fiscal Year 4 – Although any project may be submitted none will be considered for processing and analysis during the current Four-Year cycle.

2. Conceptual Design Agreement Process:

Fiscal Year 2 – January through Fiscal Year 3 - December.

Fiscal Year 3 – As time and resources permit this process may be performed during fiscal year 3.

Fiscal Year 4 – As time and resources permit this process may be performed during fiscal year 4.

3. Large Local/Regional Project Process:

Fiscal Year 2: December – June.

Fiscal Year 3 – As time and resources permit this process may be performed during fiscal year 3.

Fiscal Year 4 – As time and resources permit this process may be performed during fiscal year 4.

- A. Work with NHDOT to identify those local and/or regional projects that have a cost of more than 2/3 of two times the allocated amount (RPC amount – approximately \$8,000,000 per biennium or \$16,000,000 for a four-year cycle; 2/3 of the amount

- would be approximately \$10,700,000) and include them in the list of state-funded projects).
- B. Work with NHDOT to allow RPCs to establish a “credit line” with the State. This is the reverse of what we can currently do. Now, for example, we can submit a \$16,000,000 project using the total \$8,000,000 available for this round of funding and a firm commitment to allocate \$8,000,000 for the next round of funding. The proposal would be to put some portion of the \$8,000,000 allocation “in the bank” and available for the next round. For example, we might put forward a \$6,000,000 project and put \$2,000,000 “in the bank”. During the next round \$10,000,000 would be available for project selection with no commitments to put forward any project.
4. TAC Final Prioritized Project Process:
Fiscal Year 3: July - September
5. Legislative Process Approval:
Fiscal Year 4: October - June

March 31, 2025

William Cass
Commissioner
NH Department of Transportation
7 Hazen Drive
Concord, New Hampshire 03302-0483

RE: Rockingham Planning Commission Prioritized list of Projects for the 2027-2036 Ten Year Plan

Dear Commissioner Cass:

The Rockingham MPO has completed the regional project ranking process (details attached) with respect to the 10 Year Plan update (per RSA 228:99) and is pleased to submit to you two project priorities for this cycle. This new set of RPC project priorities is based on the assumption that projects already in the Ten Year Plan remain priorities, and that any new projects will be programmed for construction in fiscal years 2035 and 2036. The scope and cost estimates, as well as NHDOT's review comments, are attached.

- **NH 121A (Main Street)/North Avenue Intersection – Plaistow (\$3,932,562 as per NHDOT cost review):** Addressing traffic flow and safety issues at this busy intersection near the Massachusetts border was determined to be the top priority for the MPO region this cycle. NHDOT's review indicated that this would be an LPA project with match paid for by the Town of Plaistow. However, this is not something that has been discussed with Plaistow and a nearly \$800,000 match is a significant investment that they may not be prepared for. Both NH 121A and North Avenue are NHDOT facilities justifying and NHDOT managed project fully funded with federal resources.
- **NH 125/South Road Intersection Improvements - Brentwood (\$7,464,066 as per NHDOT cost review):** This project was ranked second and is based on the long-term safety improvement recommended in the NHDOT Road Safety Audit completed in early 2024. This intersection has been the site of two fatal crashes in recent years and NH 125 is part of the region's High Injury Network identified in our Regional Safety Action Plan which will be adopted in April 2025.

Recommending both projects exceeds the RPC's "target" funding allocation of \$8,055,824 and will require utilization of \$3,340,804 of funds from the next Ten Year Plan cycle. At the same time, it is hoped that the Brentwood NH 125/South Road project will be able to secure independent funding through the Safe Streets and Roads for All (SS4A) program or some other competitive grant and, in doing so, will not require the RPC to utilize any of next cycle's share of resources. Should the project receive competitive grant funding, RPC expects the \$3,340,804 would be restored to the target allocation.

Additionally, the RPC requests the following:

- Advance the engineering study for the Portsmouth Traffic Circle (44225) into the 2025-2028 STIP. This critical interchange experiences significant safety and operational problems and a completed operational assessment and alternatives analysis will both improve the potential to be funded through competitive grant programs as well as allow the MPO and NHDOT a solid basis from which make to make any decisions regarding future programming in the Ten Year Plan.
- Include addressing the safety and operational issue at the interchange of NH 101 Eastbound and I-95 into the Turnpike Bureau's queue of capital improvement projects. This interchange has been identified as a top priority for the region but is not eligible for the federal aid funds allocated to the RPC for programming in the Ten Year Plan. The scope and cost estimate for this proposal is attached.
- Conduct a review of the Ten Year Plan process and funding needs. There are opportunities for efficiencies and changes that improve outcomes for all parties. Many positive changes have been implemented since the last in-depth review and all would benefit from an examination for potential further improvements.

The MPO looks forward to working with the Department and the other RPCs/MPOs on the continued implementation and evolution of the Ten Year Plan.

Sincerely,



Tim Roache
Executive Director

cc: Executive Councilor Janet Stevens
William Oldenberg, NHDOT Director of Project Development
Bill Watson, Administrator, NHDOT Planning and Community Assistance

Project Solicitation & Selection Process

The development of regional Ten Year Plan recommendations began in early 2024 with RPC scoping the overall process, the setting of project selection criteria, and a request to stakeholders to identify transportation needs in the region. The need to send projects to engineers for scope and cost development required an earlier start on the solicitation process and setting selection criteria weights.

Solicitation for Projects (March-June, 2024): The RPC requested projects from the regional communities and planning partners beginning in March 2024 with projects due by June 6, 2024. The weights for selection criteria were set in May 2022. The project solicitation resulted in several new projects proposals received from communities. This brought the total number of identified transportation improvement projects in the region to 161, including those currently in the TIP and Ten Year Plan.

Project Development and Classification (May-June, 2024): Staff reviewed the projects in the Long Range Transportation Plan and updated details as necessary. After removing projects that have been completed or are already in the Ten Year Plan or Transportation Improvement Program, this left over **100 potentially eligible projects** for prioritization.

Initial Project Scoring and Development of Short List (June 2024): Eligible projects were scored against the selection criteria and a short list of 30 projects was presented to the MPO TAC at the June 2024 meeting. Based on budget limitations for engineering services, the TAC selected 7 projects to get new scope and cost estimates and 6 additional projects to have the cost estimates updated with current unit costs and inflation considerations.

Scope and Cost Development (August-October, 2024): RPC worked with Hoyle Tanner Associates (HTA) to scope a work order, and due to funding limitations 4 projects were removed from consideration. HTA developed new scope and cost estimates for 6 projects and updated the costs for 4 after discussions with RPC staff regarding expected scopes. A meeting with NHDOT District 6 and NHDOT Highway Design to discuss the scope of the proposed NH 101/I-95 Interchange project was held in September.

Selecting Candidate Projects (October-November, 2024): The scope and cost estimates were reviewed at the October TAC meeting and that committee recommended a list of 4 projects to be sent to NHDOT for scope and Cost review. Those projects were approved by the MPO Policy Committee at the November 13, 2024 meeting and submitted to NHDOT on November 15, 2024 for scope and cost review.

Finalize list of Ten Year Plan Priorities (February-March, 2025): NHDOT reviewed three of the four candidate projects and forwarded the results to the MPO on February 21, 2025. The MPO TAC met and recommended that the MPO prioritize the Plaistow NH 121A/North Avenue and the Brentwood NH 125/South Road projects as the regional priorities recognizing that funding both of these projects requires utilizing a portion of the RPC's allocation for the next Ten Year Plan cycle.

**NHDOT PROJECT REVIEW COMMITTEE
SUMMARY RECOMMENDATIONS FOR PROJECTS PROPOSED BY
ROCKINGHAM PLANNING COMMISSION
FOR THE 2027-2036 NH TEN YEAR TRANSPORTATION PLAN**

Initial Priority #1: Brentwood – NH125 intersection at South Road

Project summary: The purpose of this proposed project is to implement the Long-Term Safety Measures identified in the 2023 Road Safety Audit conducted at the intersection (finalized February 2024). This includes constructing a roundabout to reduce speeds at the intersection, reduce angle-type crashes, and improve access to NH 125 from South Road. The proposed scope would reconfigure the existing stop-controlled (South Road only) as a modern single-lane roundabout based on the 2023 NH 125/South Road Safety Audit. The roundabout would be approximately 150' ICD and work would be required approximately 500' north and south on NH 125 and 150' east and west on South Road. Road work would match up with the intermediate improvements to the north.

Review Comments

- The NHDOT Project Review Committee concurred that there is currently a safety Issue at the subject intersection and that this project proposes to implement long-term safety measures (roundabout construction) to address those issues.
- The Review Committee made note of the Road Safety Audit completed (by HTA) as the driving source for the proposed improvement.
- The NHDOT Project Review Committee noted that it appears that signals are not warranted at this location, however there were questions as to whether the proposed single lane roundabout would work as intended at this location.
- NHDOT review comments considered the design and construction costs based a single lane roundabout as the solution.
- Review comments considered the Conway 42522 project (single lane roundabout designed by HTA) CON costs as a comparable project.

Review Summary

- The project is recommended to commence with PE in 2031, ROW planned in 2034 and CON beginning in 2036.
- The proposed project would use **\$7,464,066** of the regional allocation for the 2027-2036 Ten Year Transportation Plan.
- NHDOT Year-of-Expenditure (YoE) estimates include 3.7%/year to account for inflation and 10% to account for indirect costs.

Funding

| Phase | 2024 RPC Estimate | 2025 NHDOT Estimate | TYP YoE |
|---------------|---------------------|---------------------|---------------------|
| PE | \$ 389,000 | \$ 750,000 | \$ 989,345 |
| ROW | \$ 30,000 | \$ 100,000 | \$ 147,103 |
| CON | \$2,500,000 | \$ 4,000,000 | \$ 6,327,618 |
| Totals | \$ 2,919,000 | \$ 4,850,000 | \$ 7,464,066 |

Initial Priority #2: Plaistow – Main Street (NH121A) Intersection with North Avenue

Project summary: The purpose of this proposed project is to address safety and operational issues occurring due to the high volume of traffic utilizing North Avenue and Main Street as well as to slow the speed of traffic utilizing Main Street. The proposed scope would reconfigure the existing stop-controlled (North Ave only) as a modern single-lane roundabout based on the 2011 Main Street Traffic Calming Study. This will require shifting the intersection to the southwest and the 140' ICR roundabout would necessitate some right-of-way acquisition. Engineering analysis by HTA predicts that the roundabout would operate at a Level of Service (LOS) A in the AM and a LOS B in the PM in the design year (2035). Additionally, the roundabout would act as a gateway to Main Street reducing speeds and truck traffic on the corridor. It is expected that this project would require a full design process to establish a preferred alternative, and this scope was utilized for planning and budgeting purposes

Review Comments

- The project Review Committee concurs with the scoping and estimating approach elected and that the operational and safety improvements proposed at the subject intersection and noted that the proposed project would mesh well with the improvements proposed at the nearby Plaistow 40641 project improvements (in-design).
- The Project Review Committee sees this project as a strong candidate for municipal management as an LPA project. This would provide for more local control over the design process and project development timeline.
- The Project Review Committee considered the Pelham 41751 project which involves construction of a similar roundabout at the intersection of NH 128 and Sherburne Rd for cost comparison purposes.

Review Summary

- The project is recommended to commence with PE in 2031; ROW in 2033 and CON in 2035.
- The proposed project would use **\$3,146,050** of the regional allocation for the 2027-2036 Ten Year Transportation Plan.
- Project would be 80% federal funds with the remaining \$786,512 (20%) paid by the Town of Plaistow as municipal match.
- This project will require execution of a Municipal Agreement outlining the project development process and continued maintenance responsibilities for Plaistow following completion of the project.
- The Year-of-Expenditure (YoE) values include inflation of 3.7%/year.

Funding

| Phase | 2024 RPC Estimate | 2025 NHDOT Estimate | TYP YoE |
|---------------|--------------------------|----------------------------|---------------------|
| PE | \$ 281,000 | \$ 750,000 | \$ 899,404 |
| ROW | \$ 140,000 | \$ 140,000 | \$ 180,542 |
| CON | \$ 2,057,000 | \$ 2,057,000 | \$ 2,852,615 |
| Totals | \$ 2,478,000 | \$ 2,947,000 | \$ 3,932,562 |

Initial Priority #4: Hampton – EB Ramp from NH 101 to I-95

Project summary: The purpose of this project is to improve traffic flow and safety at the NH 101 eastbound exit ramp to I-95. The project proposes to construct a 2-lane off-ramp which includes a 1,500 linear foot 12' auxiliary lane on NH 101 (not including a 300' taper to create the lane) and an assumed 36' wide ramp width connecting to the existing 2-lane ramp section at the NH 101 overpass bridge. Full reconstruction of about 2/3 of the existing single lane ramp length is assumed to be required to facilitate the two-lane exit and revised curvature. The remaining 1/3 is anticipated to be box widened with a cold plane and overlay. Box widening of NH 101, matching the existing select material and pavement depths, has been assumed to construct the auxiliary lane. Full depth pavement reconstruction and a crushed gravel shim for the lowspeed shoulder have been assumed. An overlay of the adjacent eastbound travel lanes on NH 101 has not been included at this time, as discussed with NHDOT. Modifications to the ramp overpass bridge, abutments, and wingwalls are also assumed not to be required

Review Comments

- NHDOT noted that the proposed improvements would be on a facility owned, operated, and maintained by the NH Turnpike System.
- These facilities are not eligible for the federal aid funds allocated to the regional planning commissions to program in the 2027-2036 Ten-Year Plan.
- The NHDOT did review the proposal and has noted agreement with the needed improvements for operational and safety issues – but this would have to be done as part of the capital planning for the enterprise funded turnpike system.
- NHDOT's Project Review Committee did not evaluate the cost details at this time.

Review Summary

- Not eligible to use federal aid funding – Turnpike system.

Funding

| Phase | 2025 RPC Estimate | 2025 NHDOT Estimate | TYP YoE |
|--------------|--------------------------|----------------------------|----------------|
| PE | \$ 654,000 | \$ --- | \$ --- |
| ROW | \$ --- | \$ --- | \$ --- |
| CON | \$ 4,796,000 | \$ --- | \$ --- |
| Total | \$ 5,450,000 | \$ --- | \$ --- |

Memorandum

To: David Walker
Assistant Director
Rockingham Planning Commission

From: Stephen Haas, PE, PTOE

cc: Tim Roache

Date: October 23, 2024 (Rev 11/8/2024)

Re: NHDOT Ten-Year Plan Conceptual Estimates

Hoyle, Tanner & Associates, Inc. (Hoyle Tanner) is pleased to submit this memorandum summarizing our services for the Rockingham Planning Commission (RPC) to prepare conceptual estimates for submission to the New Hampshire Department of Transportation (NHDOT) for inclusion in the State's Ten-Year Transportation Improvement Plan. The RPC selected ten transportation projects that are considered high priority to its member communities for Hoyle Tanner to evaluate. Six of these projects are updates of prior estimates prepared by Hoyle Tanner or other consulting firms, while four are for newly envisioned projects. Estimates were prepared utilizing prior planning and conceptual design efforts or project descriptions provided by the RPC. Hoyle Tanner evaluated these concepts to confirm general feasibility and determine required construction elements; however, engineering design and analysis were not requested or performed (unless otherwise noted below). To confirm key assumptions for each project, Hoyle Tanner met with the RPC on 8/15/24 for concurrence prior to estimate development. All estimates include construction costs, engineering costs, and right-of-way acquisition costs (if applicable) to provide a total project opinion of probable cost. A 3.7% per year inflation rate was utilized to project current construction costs to the potential 2035 construction year, as agreed in the project scope. A description of proposed improvements, estimate assumptions, and opinion of probable cost for each location are provided below. Detailed opinions of probable cost are included in Appendix A.

**This Memorandum from Hoyle Tanner Associates has
been edited by RPC to contain just the projects
submitted to NHDOT as priorities for the Ten Year Plan**

NH 121A AT NORTH AVENUE IMPROVEMENTS – PLAISTOW, NH

The Town of Plaistow and the RPC have been investigating improvements to address capacity concerns at the NH 121A at North Avenue intersection as far back as the 2011 Main Street Traffic Calming Plan prepared by the RPC. This plan recommended construction of a single lane roundabout that would address the capacity issues at the intersection and also serve as a “gateway” and traffic calming feature for the Main Street Corridor. A preliminary traffic analysis of a roundabout at this location using SIDRA Solutions analysis software indicates that the intersection could function at a level of service (LOS) A in the AM and LOS B in the PM when projected out to a potential 2053 design year if the improvements were made. Hoyle, Tanner has prepared a conceptual estimate for a 3-leg single lane roundabout with an inscribed circle diameter of 140’ at this location. To provide sufficient space to construct the roundabout and provide separation from Chandler Avenue, the center of the intersection has been shifted to southwest along Main Street and will likely require right-of-way impacts to construct in the wooded area in this location. The opinion of probable cost for the NH 121A at North Avenue Improvements is \$4,100,000.

NH 125 AT SOUTH ROAD SAFETY IMPROVEMENTS – BRENTWOOD, NH

The need for safety improvements at the intersection of NH 125 at South Road has been envisioned by the Town of Brentwood for many years. These concerns resulted in a Road Safety Audit (RSA); prepared by Hoyle Tanner in February 2024, which recommended near, intermediate, and long-term improvements at the intersection. Intermediate improvements to construct dedicated left turn lanes on NH 125 at the intersection, as well as portions of a two-way left turn lane, are currently being coordinated with NHDOT for construction in the near future. The RPC has asked that the long-term improvement at the intersection, a single lane roundabout as shown in the RSA, is included in the ten-year plan estimates. This roundabout, anticipated to have an approximate 150’ inscribed circle diameter, will also construct raised medians on each roadway approach to help channelize and calm traffic. The cost estimate in the RSA was updated with current unit prices and projected out to 2035 with the annual 3.7% rate. The opinion of probable cost for the NH 125 at South Road Safety Improvements is \$4,200,000.

NH 101 EASTBOUND OFF RAMP AT I-95 INTERCHANGE IMPROVEMENTS – HAMPTON, NH

The NH 101 Eastbound off ramp to I-95 experiences capacity issues during peak travel times that have resulted in safety concerns. In the AM peak, the single lane ramp with sharp curvature requires motorists (especially large vehicles) to significantly reduce speed to negotiate the ramp resulting in long queues of traffic. These queues; when combined with travel speeds, solar glare, and a profile crest just to the east of the ramp that limits sight distance; have increased the potential for crashes. Hoyle Tanner and the RPC met with NHDOT District 6 on 9/23/24 to discuss the potential solution. It was agreed that converting the ramp to a two-lane exit and providing an

auxiliary lane on NH 101 for deceleration would likely be the preferred improvement. Some specifics of the desired ramp and auxiliary design were further discussed with NHDOT Highway Design Bureau via email. Hoyle Tanner has prepared a conceptual estimate for an improvement to construct a 2-lane off-ramp which includes a 1,500 linear foot 12' auxiliary lane on NH 101 (not including a 300' taper to create the lane) and an assumed 36' wide ramp width connecting to the existing 2-lane ramp section at the NH 101 overpass bridge. Full reconstruction of about 2/3 of the existing single lane ramp length is assumed to be required in order to facilitate the two-lane exit and revised curvature. The remaining 1/3 is anticipated to be box widened with a cold plane and overlay. Box widening of NH 101, matching the existing select material and pavement depths, has been assumed to construct the auxiliary lane. Full depth pavement reconstruction and a crushed gravel shim for the low-speed shoulder have been assumed. An overlay of the adjacent eastbound travel lanes on NH 101 has not been included at this time, as discussed with NHDOT. Modifications to the ramp overpass bridge, abutments, and wingwalls are also assumed not to be required. The opinion of probable cost for the NH 101 Eastbound Off Ramp at I-95 Interchange Improvements is \$9,000,000.

CONCLUSION AND RECOMMENDATIONS

The conceptual opinions of probable cost are provided for the RPC to determine which projects will be recommended to NHDOT for inclusion in the State's Ten-year transportation plan. The estimates are based on currently available project descriptions and conceptual layouts (if available). Further study is anticipated to be required for many of these project locations to determine the preferred alternative or what design elements will be included. Depending on the chosen design, additional construction, engineering, and right-of-way acquisition costs may be required. Costs have been developed utilizing current year (2024) unit prices and inflated to the 2035 build year at a 3.7% per year inflation rate. As the current inflation rate significantly exceeds this value, it is recommended that the RPC coordinate with NHDOT to determine if an adjustment in the rate or build year is desired.

APPENDIX A

Detailed Opinion of Probable Cost



Project: Rockingham Planning Commission: NHDOT Ten Year Plan Conceptual Estimate
Project No. 22.144401.02
Location: 07 Plaistow @ NH121A
Task: Conceptual Estimate
Calculated By: MAP Date: 10/10/2024
Checked By: JFMS Date: 10/17/2024

SHEET 1 OF 3

CONCEPTUAL ESTIMATE

NH 121A / North Avenue Proposed Roundabout

SECTION A - MAJOR ITEMS

| ITEM NO. | DESCRIPTION | UNIT | QUANTITY | UNIT COST | COST |
|-----------------------|--|------|--------------------|-----------|-------------------|
| 201.1 | CLEARING AND GRUBBING (F) | A | 0.40 | \$ 30,000 | \$ 12,000.00 |
| 203.1 | COMMON EXCAVATION | CY | 4500 | \$ 18.00 | \$ 81,000.00 |
| 203.6 | EMBANKMENT-IN-PLACE (F) | CY | 350 | \$ 14.00 | \$ 4,900.00 |
| 304.1 | SAND (F) | CY | 1250 | \$ 38.00 | \$ 47,500.00 |
| 304.2 | GRAVEL (F) | CY | 1250 | \$ 45.00 | \$ 56,250.00 |
| 304.3 | CRUSHED GRAVEL (F) | CY | 1350 | \$ 55.00 | \$ 74,250.00 |
| 403.11### | HBP-VARIOUS | TON | 880 | \$ 115.00 | \$ 101,200.00 |
| 403.12 | HBP-HAND METHOD | TON | 210 | \$ 220.00 | \$ 46,200.00 |
| 417 | COLDPLANING BITUMINOUS SURFACES | SY | 18 | \$ 6.00 | \$ 108.00 |
| 608.26 | 6" CONCRETE SIDEWALK (F) | SY | 280 | \$ 65.00 | \$ 18,200.00 |
| 608.38 | 8" REINFORCED CONCRETE SIDEWALK (F) | SY | 330 | \$ 100.00 | \$ 33,000.00 |
| 609.01 | STRAIGHT GRANITE CURB | LF | 1750 | \$ 47.00 | \$ 82,250.00 |
| 609.01187 | STRAIGHT GRANITE CURB, 18" HIGH WITH 3" ROUNDED EDGE | LF | 480 | \$ 100.00 | \$ 48,000.00 |
| MISCELLANEOUS ROADWAY | | | 10% OF ABOVE TOTAL | \$ | 60,485.80 |
| | | | SUBTOTAL A | \$ | 665,343.80 |

SECTION B - MISCELLANEOUS ITEMS

| | | | |
|-----------------------------------|-------------------|----|-------------------|
| SIGNS, MARKINGS, LOAM/HUMUS, ETC. | 15% | \$ | 99,801.57 |
| | SUBTOTAL B | \$ | 765,145.37 |

SECTION C - DRAINAGE ITEMS

| | | | |
|-------------------------------------|-------------------|----|-------------------|
| PIPES, UNDERDRAIN, CB's, MH's, ETC. | 25% | \$ | 191,286.34 |
| | SUBTOTAL C | \$ | 956,431.71 |

SECTION D - TRAFFIC CONTROL

| ITEM NO. | DESCRIPTION | UNIT | QUANTITY | UNIT COST | COST |
|----------|---------------------------------|------|--------------------|--------------|---------------------|
| 618.61 | UNIFORMED OFFICERS WITH VEHICLE | \$ | - | \$ 1.00 | \$ - |
| 618.7 | FLAGGERS | HR | 2800 | \$ 50.00 | \$ 140,000.00 |
| 619.1 | MAINTENANCE OF TRAFFIC | U | 1 | \$125,000.00 | \$ 125,000.00 |
| | MISCELLANEOUS TRAFFIC CONTROL | | 10% OF ABOVE TOTAL | \$ | 26,500.00 |
| | | | SUBTOTAL D | \$ | 1,247,931.71 |

SECTION E - EROSION AND SEDIMENT CONTROL

| | | | |
|---|--------------------|----|---------------------|
| EROSION, SEDIMENT, AND POLLUTION CONTROL (HAY BALES, SILT FENCE, SWPPP, TEMP. WATER POLL. CONTROL, ETC.) | 30% OF DRAINAGE | \$ | 57,385.90 |
| | SUBTOTAL E | \$ | 1,305,317.62 |



Project: Rockingham Planning Commission: NHDOT Ten Year Plan Conceptual Estimate
Project No. 22.144401.02
Location: 07 Plaistow @ NH121A
Task: Conceptual Estimate
Calculated By: MAP Date: 10/10/2024
Checked By: JFMS Date: 10/17/2024

SHEET 2 OF 3

CONCEPTUAL ESTIMATE

NH 121A / North Avenue Proposed Roundabout

SECTION F - ADDITIONAL ITEMS

| | | |
|-------------------|----|---------------------|
| BMP's | \$ | 150,000.00 |
| Landscaping | \$ | 20,000.00 |
| SUBTOTAL F | \$ | 1,475,317.62 |

SECTION G - MOBILIZATION AND CONTINGENCIES

| | | | |
|---|------|----|---------------------|
| ROADWAY MOBILIZATION | 10% | \$ | 147,531.76 |
| SUBTOTAL G | | \$ | 1,622,849.38 |
| ROUNDED CONSTRUCTION SUBTOTAL: | | \$ | 1,623,000.00 |
| CONTINGENCY | 15% | \$ | 244,000.00 |
| ROUNDED CONSTRUCTION TOTAL: | | \$ | 1,870,000.00 |
| DESIGN ENGINEERING: | 15% | \$ | 281,000.00 |
| CONSTRUCTION ENGINEERING: | 10% | \$ | 187,000.00 |
| RIGHT OF WAY ACQUISITION | | \$ | 140,000.00 |
| SUBTOTAL | | \$ | 2,478,000.00 |
| NHDOT PROJECT ADMINISTRATION | 10% | \$ | 248,000.00 |
| INFLATION (11 YEARS) | 3.7% | \$ | 1,339,295.99 |
| ROUNDED PROJECT TOTAL COSTS (CON, ROW, PE) | | \$ | 4,100,000.00 |



CONCEPTUAL ESTIMATE - ASSUMPTIONS

This Conceptual Engineer's Estimate of Probable Construction Costs is based on the anticipated scope of work, as well as Hoyle Tanner's experience with similar projects and understanding of current industry trends. The estimate has not been based on a final design for this project, and as such, it is intended to be preliminary in nature. It should be noted that changes in material or labor costs in the construction industry could impact the project cost in either direction. Assumptions used for this estimate are listed below.

1. Full depth reconstruction within project limits consisting of: 6" HBP, 12" Cr Grav, 12" Grav, 12" Sand
2. Pedestrian sidewalks are not included; Sidewalk items used for estimate are for concrete medians
3. Utility pole relocation (by others) will be required
4. Driveway reconstruction, where necessary, will consist of 3" HBP hand method & 8" crushed gravel
5. Stormwater BMP(s) will be required to comply with current AoT regulations
6. Construction duration is one season - no winter shutdown
7. No utility work is included in the project
8. A 3-leg roundabout with a 140' ICD has been assumed.



Project: Brentwood RSA
Project No. 22.144401.02
Location: 04 Intersection of NH 125 @ South Road
Task: Quantity Calculations
Calculated By: MAP
Checked By: JFMS

Date: 9/17/2024
Date: 10/18/2024

SHEET 1 OF 3

CONCEPTUAL ESTIMATE

NH 125 @ South Road Roundabout

SECTION A - MAJOR ITEMS

| ITEM NO. | DESCRIPTION | UNIT | QUANTITY | UNIT COST | COST |
|-----------|--|------|----------|-----------|---------------|
| 203.1 | COMMON EXCAVATION | CY | 4500 | \$ 18.00 | \$ 81,000.00 |
| 203.6 | EMBANKMENT-IN-PLACE (F) | CY | 1450 | \$ 14.00 | \$ 20,300.00 |
| 304.1 | SAND (F) | CY | 1900 | \$ 38.00 | \$ 72,200.00 |
| 304.2 | GRAVEL (F) | CY | 1600 | \$ 45.00 | \$ 72,000.00 |
| 304.3 | CRUSHED GRAVEL (F) | CY | 1500 | \$ 55.00 | \$ 82,500.00 |
| 403.11### | HOT BITUMINOUS PAVEMENT, MACHINE METHOD | TON | 1400 | \$ 115.00 | \$ 161,000.00 |
| 417 | COLD PLANING BITUMINOUS SURFACES | SY | 3000 | \$ 6.00 | \$ 18,000.00 |
| 608.26 | 6" CONCRETE SIDEWALK (F) | SY | 500 | \$ 65.00 | \$ 32,500.00 |
| 608.38 | 8" REINFORCED CONCRETE SIDEWALK (F) | SY | 700 | \$ 100.00 | \$ 70,000.00 |
| 609.01 | STRAIGHT GRANITE CURB | LF | 1500 | \$ 47.00 | \$ 70,500.00 |
| 609.01187 | STRAIGHT GRANITE CURB, 18" HIGH WITH 3" ROUNDED EDGE | LF | 380 | \$ 100.00 | \$ 38,000.00 |

MISCELLANEOUS ROADWAY

10% OF ABOVE TOTAL

\$ 71,800.00

SUBTOTAL A

\$ 789,800.00

SECTION B - MISCELLANEOUS ITEMS

SIGNS, MARKINGS, LOAM/HUMUS, ETC.

10%

\$ 78,980.00

SUBTOTAL B

\$ 868,780.00

SECTION C - DRAINAGE ITEMS

PIPES, UNDERDRAIN, CB's, MH's, ETC.

15%

\$ 130,317.00

SUBTOTAL C

\$ 999,097.00

SECTION D - TRAFFIC CONTROL

| ITEM NO. | DESCRIPTION | UNIT | QUANTITY | UNIT COST | COST |
|----------|---|------|--------------|--------------------|---------------|
| 606.417 | PORTABLE CONCRETE BARRIER FOR TRAFFIC CONTROL | LF | 600 | \$ 30.00 | \$ 18,000.00 |
| 618.61 | UNIFORMED OFFICERS WITH VEHICLE | \$ | \$ 93,000.00 | \$ 1.00 | \$ 93,000.00 |
| 618.7 | FLAGGERS | HR | 2100 | \$ 50.00 | \$ 105,000.00 |
| 619.1 | MAINTENANCE OF TRAFFIC | LS | 1 | \$ 100,000.00 | \$ 100,000.00 |
| | MISCELLANEOUS TRAFFIC CONTROL | | | 10% OF ABOVE TOTAL | \$ 31,600.00 |

SUBTOTAL D

\$ 1,346,697.00

SECTION E - EROSION AND SEDIMENT CONTROL

EROSION, SEDIMENT, AND POLLUTION CONTROL
(HAY BALES, SILT FENCE, SWPPP, TEMP. WATER POLL. CONTROL, ETC.)

30%
OF DRAINAGE

\$ 39,095.10

SUBTOTAL E

\$ 1,385,792.10



Project: Brentwood RSA
Project No. 22.144401.02
Location: 04 Intersection of NH 125 @ South Road
Task: Quantity Calculations
Calculated By: MAP
Checked By: JFMS

Date: 9/17/2024
Date: 10/18/2024

SHEET 2 OF 3

CONCEPTUAL ESTIMATE

NH 125 @ South Road Roundabout

SECTION F - ADDITIONAL ITEMS

| | | | |
|-------------------|--|-----------|---------------------|
| BMP's | | \$ | 150,000.00 |
| SUBTOTAL F | | \$ | 1,535,792.10 |

SECTION G - MOBILIZATION

| | | | |
|---|-----|-----------|------------------------|
| ROADWAY MOBILIZATION | 10% | \$ | 153,579.21 |
| SUBTOTAL G | | \$ | 1,689,371.31 |
| ROUNDED CONSTRUCTION SUBTOTAL: | | \$ | 1,690,000.00 |
| CONTINGENCY | | 15% \$ | 254,000.00 |
| ROUNDED CONSTRUCTION TOTAL | | \$ | 1,945,000.00 |
| DESIGN ENGINEERING | | 20% \$ | 389,000.00 |
| CONSTRUCTION ENGINEERING | | 10% \$ | 195,000.00 |
| RIGHT OF WAY ACQUISITION | | \$ | 30,000.00 |
| SUBTOTAL | | \$ | 2,559,000.00 |
| NHDOT PROJECT ADMINISTRATION | | 10% \$ | 256,000.00 |
| INFLATION (11 YEARS) | | 3.7% \$ | 1,383,022.09 |
| ROUNDED PROJECT TOTAL COSTS (CON, ROW, PE) | | | \$ 4,200,000.00 |



CONCEPTUAL ESTIMATE - ASSUMPTIONS

This Conceptual Engineer's Estimate of Probable Construction Costs is based on the anticipated scope of work, as well as Hoyle Tanner's experience with similar projects and understanding of current industry trends. The estimate has not been based on a final design for this project, and as such, it is intended to be preliminary in nature. It should be noted that changes in material or labor costs in the construction industry could impact the project cost in either direction. Assumptions used for this estimate are listed below.

1. NH 125 Roundabout, NB approach, and SB approach comprised of 6" HBP, 12" Cr Gravel, 12" Gravel, 18" Sand
2. South Road EB approach and WB approach comprised of 4" HBP, 8" Cr Gravel, 12" Gravel
3. NH 125 north and south of roundabout to tie into previously constructed three lane roadway section
5. Any one-way alternating operations will be limited to work hours; two travel lanes will be provided outside of Contractor working hours
6. No permanent easements or property takings will be required
7. No profile adjustments on NH 125
8. Roundabout layout is based on conceptual alternative prepared in 2/24 Road Safety Audit prepared by Hoyle Tanner.



Project: Rockingham Planning Commission: NHDOT Ten Year Plan Conceptual Estimate
Project No. 22.144401.02
Location: 10 Hampton @NH 101
Task: Conceptual Estimate
Calculated By: MAP Date: 10/7/2024
Checked By: JFMS Date: 10/18/2024

SHEET 1 OF 3

CONCEPTUAL ESTIMATE

NH 101 Eastbound Off Ramp / I-95 Interchange

SECTION A - MAJOR ITEMS

| ITEM NO. | DESCRIPTION | UNIT | QUANTITY | UNIT COST | COST |
|-----------------------|---|------|--------------------|-------------|---------------------|
| 201.1 | CLEARING AND GRUBBING (F) | A | 1.50 | \$ 30,000 | \$ 45,000.00 |
| 203.1 | COMMON EXCAVATION | CY | 23200 | \$ 18.00 | \$ 417,600.00 |
| 203.6 | EMBANKMENT-IN-PLACE (F) | CY | 2100 | \$ 14.00 | \$ 29,400.00 |
| 304.1 | SAND (F) | CY | 3950 | \$ 38.00 | \$ 150,100.00 |
| 304.2 | GRAVEL (F) | CY | 4700 | \$ 45.00 | \$ 211,500.00 |
| 304.3 | CRUSHED GRAVEL (F) | CY | 4700 | \$ 55.00 | \$ 258,500.00 |
| 403.11### | HBP-VARIOUS, MACHINE METHOD | TON | 4900 | \$ 115.00 | \$ 563,500.00 |
| 417 | COLD PLANING BITUMINOUS SURFACES | SY | 1650 | \$ 6.00 | \$ 9,900.00 |
| 606.1454 | BEAM GUARDRAIL (TERMINAL UNIT TYPE EAGRT, TL 3) | U | 3 | \$ 4,500.00 | \$ 13,500.00 |
| 606.18001 | 31" W-BEAM GUARDRAIL W/8" OFFSET BLOCK (STEEL POST) | LF | 1600 | \$ 35.00 | \$ 56,000.00 |
| 608.26 | 6" CONCRETE SIDEWALK (F) | SY | 80 | \$ 65.00 | \$ 5,200.00 |
| 608.28 | 8" CONCRETE SIDEWALK (F) | SY | 34 | \$ 70.00 | \$ 2,380.00 |
| 609.216 | STRAIGHT GRANITE SLOPE CURB 6" HIGH | LF | 2900 | \$ 45.00 | \$ 130,500.00 |
| 628.2 | SAWED BITUMINOUS PAVEMENT | LF | 4200 | \$ 5.00 | \$ 21,000.00 |
| MISCELLANEOUS ROADWAY | | | 10% OF ABOVE TOTAL | \$ | 191,408.00 |
| | | | SUBTOTAL A | \$ | 2,105,488.00 |

SECTION B - MISCELLANEOUS ITEMS

| | | | |
|-----------------------------------|-------------------|-----------|---------------------|
| SIGNS, MARKINGS, LOAM/HUMUS, ETC. | 10% | \$ | 210,548.80 |
| | SUBTOTAL B | \$ | 2,316,036.80 |

SECTION C - DRAINAGE ITEMS

| | | | |
|-------------------------------------|-------------------|-----------|---------------------|
| PIPES, UNDERDRAIN, CB's, MH's, ETC. | 10% | \$ | 231,603.68 |
| | SUBTOTAL C | \$ | 2,547,640.48 |

SECTION D - TRAFFIC CONTROL

| ITEM NO. | DESCRIPTION | UNIT | QUANTITY | UNIT COST | COST |
|----------|---|------|--------------------|--------------|---------------------|
| 606.417 | PORTABLE CONCRETE BARRIER FOR TRAFFIC CONTROL | LF | 1750 | \$ 50.00 | \$ 87,500.00 |
| 618.61 | UNIFORMED OFFICERS WITH VEHICLE | \$ | \$ 162,000.00 | \$ 1.00 | \$ 162,000.00 |
| 618.7 | FLAGGERS | HR | 200 | \$ 50.00 | \$ 10,000.00 |
| 619.1 | MAINTENANCE OF TRAFFIC | U | 1 | \$220,000.00 | \$ 220,000.00 |
| | MISCELLANEOUS TRAFFIC CONTROL | | 10% OF ABOVE TOTAL | \$ | 47,950.00 |
| | | | SUBTOTAL D | \$ | 3,075,090.48 |

SECTION E - EROSION AND SEDIMENT CONTROL

| | | | |
|---|--------------------|-----------|---------------------|
| EROSION, SEDIMENT, AND POLLUTION CONTROL (HAY BALES, SILT FENCE, SWPPP, TEMP. WATER POLL. CONTROL, ETC.) | 30% OF DRAINAGE | \$ | 69,481.10 |
| | SUBTOTAL E | \$ | 3,144,571.58 |



Project: Rockingham Planning Commission: NHDOT Ten Year Plan Conceptual Estimate
Project No. 22.144401.02
Location: 10 Hampton @NH 101
Task: Conceptual Estimate
Calculated By: MAP Date: 10/7/2024
Checked By: JFMS Date: 10/18/2024

SHEET 2 OF 3

CONCEPTUAL ESTIMATE

NH 101 Eastbound Off Ramp / I-95 Interchange

SECTION F - ADDITIONAL ITEMS

| | | | |
|-------|-------------------|----|--------------|
| BMP's | | \$ | 300,000.00 |
| | SUBTOTAL F | \$ | 3,444,571.58 |

SECTION G - MOBILIZATION AND CONTINGENCIES

| | | | |
|----------------------|---|-----------|------------------------|
| ROADWAY MOBILIZATION | 10% | \$ | 344,457.16 |
| | SUBTOTAL G | \$ | 3,789,028.74 |
| | ROUNDED CONSTRUCTION SUBTOTAL: | \$ | 3,790,000.00 |
| | CONTINGENCY 15% | \$ | 569,000.00 |
| | ROUNDED CONSTRUCTION TOTAL: | \$ | 4,360,000.00 |
| | DESIGN ENGINEERING: | 15% \$ | 654,000.00 |
| | CONSTRUCTION ENGINEERING: | 10% \$ | 436,000.00 |
| | RIGHT OF WAY ACQUISITION | \$ | - |
| | SUBTOTAL | \$ | 5,450,000.00 |
| | NHDOT PROJECT ADMINISTRATION: | 10% \$ | 545,000.00 |
| | INFLATION (11 YEARS) | 3.7% \$ | 2,945,370.31 |
| | ROUNDED PROJECT TOTAL COSTS (CON, ROW, PE) | | \$ 9,000,000.00 |



CONCEPTUAL ESTIMATE - ASSUMPTIONS

This Conceptual Engineer's Estimate of Probable Construction Costs is based on the anticipated scope of work, as well as Hoyle Tanner's experience with similar projects and understanding of current industry trends. The estimate has not been based on a final design for this project, and as such, it is intended to be preliminary in nature. It should be noted that changes in material or labor costs in the construction industry could impact the project cost in either direction. Assumptions used for this estimate are listed below.

1. NH 101 widened using 1.5" wearing, 2.5" binder, 4" base, and 12" each crushed gravel, gravel, & sand
2. NH 101 box widening begins at existing EP and starts approx. 100' east of overhead sign structure
3. NH 101 existing shoulder will be reconstructed with 8" HBP & 6" Crushed Gravel shim
4. Off-Ramp typical section assumed to be 1.5" wearing, 2.5" binder, 3" base, and 12" each crushed gravel, gravel, and sand.
5. Off-Ramp will be box widened to 36', using above typical, beginning at existing EP
6. Where proposed off-ramp alignment differs from existing off-ramp alignment, existing pavement will be completely removed and ramp will be repaved with 7" HBP & 6" Crushed Gravel
7. Where proposed off-ramp alignment matches existing off-ramp alignment, existing pavement will be cold planed and overlaid
8. Off-Ramp limit of work approx. 225' before southern bridge abutment.
9. This estimate assumes no R.O.W. impacts
10. For earthwork and select material quantities, flatter side slopes of 4:1 to 6:1 were assumed, however assumed guardrail lengths account for potential steepening of side slopes to limit wetland impacts.
11. Construction duration is one season - no winter shutdown
12. Stormwater BMP(s) will be required to comply with current AoT regulations
13. Modifications to ramp bridge overpass, abutments, and wing walls are not required.
14. Cold plane and overlay of NH 101 EB travel lanes adjacent to ramp widening will not be required at this time.